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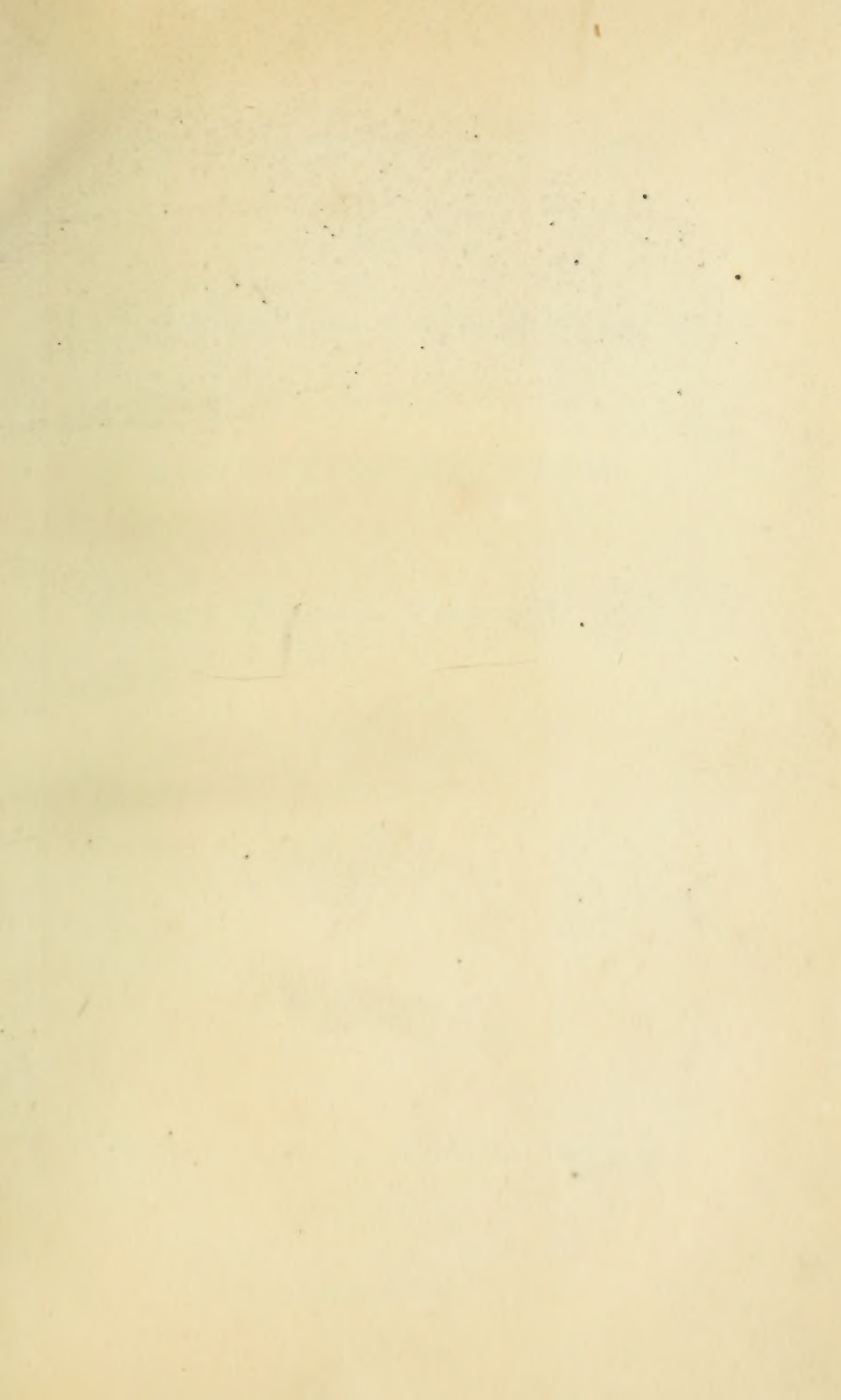
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CAMEOS FROM THE SILVER-LAND;
OR THE
EXPERIENCES OF A YOUNG NATURALIST
IN THE
ARGENTINE REPUBLIC,

BY
ERNEST WILLIAM WHITE, F. Z. S.

IN TWO VOLUMES

V O L . I I .

FAMAM EXTENDERE FACTIS

LONDON: JOHN VAN VOORST, 1 PATERNOSTER ROW

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P R E F A C E

The second volume of the Cameos, now before the public, has been delayed many months beyond the appointed time, simply owing to the difficulties connected with the printing which has been done in Buenos Aires.

As its title indicates, the work makes no pretensions to be statistic, although wherever numerical data occur they may be relied on, but consists solely of a portrayal of the successive pictures presented to the mind's eye of a very young man, during his toilsome wanderings over the vast and varied territories therein described; and as such, the author leaves it with his countrymen at home, for whose acceptance alone it has been written.

Buenos Aires, April 1882.

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The river Uruguay, a health-giving stream impregnated with sarsaparilla, and the lesser of the two affluents which swell into the mighty La Plata, possesses charms for the traveller, denied to the greater, the Paraná, at least in the lower part of its course; the water is clearer, the range not so vast, the scenery more varied and picturesque, whilst the traces of industry are more patent and the difficulties and dangers of its navigation add a piquancy unknown to the sister waters.

As its shores were to me as yet an unknown region, I determined to spend a fortnight in becoming familiar with their beauties, so on the morning of the 25th of December, in the midst of a glorious summer season, a friend joined me in taking return tickets from Buenos Aires to Concordia, Entre Rios, which at the then state of the tide, was the furthest point upwards that a steamer could reach. The fare of 28 patacones (£5 10s), we considered extremely moderate. The Saturno, a fine vessel which has since been wrecked in front of the capital, carried us as far as Fray Bentos, Banda Oriental, and one of its satellites, the Pingo, the remainder of the journey, as the river was too low to admit the bulky planet higher: but of this change of boats we knew nothing, until it was on the point of becoming a *fait accompli*. About fifty passengers trod the decks, including four ladies, only two or three of whom however besides ourselves, were booked for the whole distance.

Steering peacefully but rapidly through a part of the Argentine fleet, consisting of two ironclads and a like number of gunboats, which lay with their strength muzzled directly in our path, we take a N.E. course and then to breakfast. Our *vis-à-vis* was a young Argentine, a veritable Münchhausen who, by his wonderful tales of horseracing, slaying of Chimeras and general dexterity in field and flood, provoked such unmerciful quizzing from every quarter as quickened our digestion by amusement. During breakfast we pretty well lose sight of the Argentine coast and have nothing before us but a

broad freshwater ocean covered with innumerable blue-flowered camalotes, consisting chiefly of *Pontederia*, which spread their broad leaves as sails to speed them on their course; these nesine fragments descend the Paraná but are unknown on the bosom of the Uruguay. On our right soon rises a long low ridge of sand indicating the Banda Oriental coast, terminating opposite the island of Martin Garcia, in cliffs resembling those of loved Albion. Calm as the Thames at London bridge is all this mighty estuary; it is not always so however, but on this holy day of peace

“The winds with wonder whist
Smoothly the waters kissed!”

and it is only by sailing over it in the glare of daylight that any adequate impression of its vastness can be obtained. Whence comes all this ever-flowing tide? is a question readily answered by the rigid scientist, but with whose conclusions, the imagination rests not satisfied.

After leaving the outer roads of Buenos Aires, but little shipping is met with, and the reflection immediately occurs, how different the case would be, were this magnificent water-highway in the hands of the Anglo-Saxon race. On finding ourselves nearly abreast of Martin Garcia, the Argentine coast magically arose under a strong mirage, the trees appearing suspended in the air and completely separated from the shore line; whilst a shoal several miles in extent threatening our port bow, indicated the necessity of hugging the island, if we would avoid the fate of a fine bark which lay rotting

only a few yards off. The navigation is extremely perilous especially at low water and yet but few buoys are visible, an unaccountable omission, at least in times of peace. A boat containing the *comandante* sallies from the fort and we, in common with all other passing vessels, are obliged to lie to, in order to await its visit.

Martin Garcia, at once the Norfolk island and Gibraltar of the River Plate, is the key of the common entrance to both the Paraná and Uruguay, as their bifurcation occurs farther north; and the channel, whose character may be surmised from its name "*Hell channel*," passes within easy reach of the guns of this sentinel of the rivers, which has been strongly fortified by the Argentine government. A barren looking granitic tract, whence are quarried the *adoquines* (paving stones) for the streets of the metropolis, with low sandy shores, rising in the interior to the height of two hundred feet and bristling with permanent fortifications and earthworks, it presents a standing menace to dispute with intruders entrance by water into the heart of the republic.

On entering the River Uruguay, which has an embouchure of about thirteen miles, both banks are visible and very striking differences they present; the right or Entre-Riano shore is well-wooded and clothed with vegetation, whilst the left or Montevidean lies in all its naked barrenness. Further on, the Banda Oriental coast alters its character, being fringed with islands and less sandy; then jut out into the river a succession of bold bluffs, almost all with a bloody history, covered with a scanty verdure

emerging from sand, presenting a close general resemblance to the southern shore of the isle of Wight; and these promontories are usually dotted with estancias. Casting our eyes across the broad waters, we notice a change there likewise; long reefs of sand exchange verdure for sterility, and it is a remarkable circumstance throughout our whole progress up the Uruguay, that the two shores bear continually opposite or, so to speak, complementary characters, not only physically and politically but botanically; when one is bold or fertile, the other is low or sterile. We now pass several wrecks, attesting the difficulties which beset our watery path.

Rounding a point, we suddenly come upon what looks uncommonly like an English fishing village, with its craft quietly reposing in a snug bay; the church and cemetery topping one eminence, whilst the residence of the lord of the manor caps another, and learn that this is *Nueva Palmira*. The Oriental flag here boards us for the first time and, the Easterns got rid of, the *Saturno* is again let loose on her orbit to hug the Montevidean coast, which now descends again to long reaches of low flat sands, with a broader stream, forming extensive sabulous, and in some cases well-wooded islands, which stretch leagues upon leagues along this left bank. A glorious moon, within two days of the full, succeeded one of the angriest yet finest of sunsets, and her rays, falling full upon the capacious bosom of the placid river transformed it into a lake of burnished, quivering silver. At about 9 p.m. we arrive off the mouth of the Rio Negro (Black river), called

thus, because the decaying Sarsaparilla roots, with which its banks are lined, impregnate and discolour the waters and at the same time render them so highly medicinal, as to attract great numbers of bathers from all parts to its shores: the chemical constitution of this healing stream will be understood at a glance from the following analysis, although its virtue seems to me rather to reside in the free Sarsaparilla than in the presence of the various salts:

Sulphate of Lime.....	0,676
Carbonate of Lime.....	0,142
Carbonic Acid.....	0,184
Sulphate of Soda.....	0,059
Nitrogen	0,030
Sulphuret of Magnesium.....	0,056
Sulphuretted Hydrogen.....	0,037
	<hr/>
	1,184 grammes per litre

and it is a noticeable fact that all the considerable tributaries of the Uruguay are the gift of the Montevidean territory. Here a small steamer was awaiting us to transport passengers and merchandise to the town of Mercedes which lies some few miles up the Black river and must be considerable, judging from the quantity of heavy goods transferred. At eleven p.m. when I had just succeeded in squeezing my desnuded body into one of those constricted boxes termed bunks which, designed evidently by some undertaker, fit the human body without a spare inch in any direction, and was composing myself for a snooze till daybreak, in burst the steward with the unpleasant and totally unexpected news, that we had to change steamers in two minutes. The two minutes proved nearly three hours, nevertheless

within the stipulated time I rushed upon deck with all my impedimenta, only to find, that we were still half an hour from Fray Bentos, of *extractum carnis* celebrity, whose lights burst upon us about midnight, its roadstead illumined with the red, green and white lanterns of three more of our satellites; one for Fray Bentos, a second for Gualeguaychu, and the third, the Pingo, destined to receive us for the completion of the voyage. At Fray Bentos, which lies on the Banda Oriental side, the river takes a sudden bend eastwards at right angles and henceforth contracts to half its former breadth; and immediately opposite, on the other shore, is faced by its rival Gualeguaychu, both places enjoying great celebrity for *estancias*, *saladeros* and *graserias*. From eleven to two, three mortal hours, we stood beside our luggage, awaiting transmission, meanwhile sniffing the carrion from Liebig's great factory overlooking the river. No one appeared, to give orders or advice, until after loading the other two steamers and receiving wool and hides for Buenos Aires, we were permitted to embark upon the Pingo, whose attentive stewards and luxurious open saloon berths were very grateful at that weary hour: sleep flew in on the balmy air through the wide open windows and settled on our exhausted frames and I knew nothing more until, as the rising sun's disk was cut in twain by the horizon, I started upon deck to view the landscape. We were coursing through numberless islands, with a scenery on both banks exactly like that of the Suffolk river Orwell, but with an atmosphere O! how different! ours was as

the balm of Eden, theirs the nipping, dry Eoic. The breadth of the stream is here about half a mile, and the moderately elevated banks are clothed with vivid green to the water's edge; then as the river narrows again, we traverse a beautiful Ægean, whose innumerable islets are thickly wooded, principally with Espinillo (*Acacia cavenia*), Tala (*Celtis Sellowiana*), the willow of Humboldt, Ceibo (*Erythrina cristagalli*) and Laurel, but which, to my utter astonishment, presented scarcely any trace of animal life; hardly a dozen butterflies, a chimango or two, and a few weary-looking butcher birds, were its sole visible representatives. About six a.m. whilst passing through low jungle, we sight our first city on the Argentine side, Concepcion del Uruguay, the capital of the province of Entre-Rios; and entering a deep channel scarce a hundred yards broad, flanked by a double row of poplars, emerge in front of the splendid saladero of Santa Candida. Adjoining this stands the palatial stone residence of the late General Urquiza, where in the days of his power, as governor of the province, he used to make his ministers await his pleasure, whilst he leisurely sorted hides within. A man with all the instincts of the gaucho, yet covered with the gloss of civilization was this General Urquiza; now sorting hides, now besieging Buenos Aires with forty thousand men; at one time making tallow candles, at another superintending the frescos of his battles; now fiercely bestriding his favourite horse on the public turf, now dispensing hospitality like a prince. His palace and estate (larger than Wales) at San José,

were the wonder not alone of the province, but of the nation; at a cost of half a million sterling he planned, laid out, adorned and stocked them: but he was too great a man for a republic and met the usual fate of assassination in 1870.

In a few minutes we were abreast of the port and a crowd of minnows soon surround our Triton.

Beyond conception dreary is the Port of Concepcion del Uruguay! in fact, what strikes the traveller is, the extreme solitariness of the upper part of this noble river: where a town does occur, it seems the residence of almost primeval man: and we, in spite of the anachronism, the pristine explorers. Immediately on leaving Uruguay at 8 a.m. awnings are spread over the whole ship, in anticipation of a roasting day, which was amply verified. We had to cross a nasty bar to enter the main channel and all the passengers were driven forwards like sheep to equalize the weight; fortunately our attempt was successful, but by our side lay the wreck of a large brigantine, whose career as a traveller was ended.

Here one of the prettiest possible perspectives is kaleidoscoped before our view, for emerging into an extensive reach, three quarters of a mile in breadth, forming the principal stream, on our right the immediate Banda Oriental coast presents nothing but golden sand dunes covered with scanty brushwood, succeeded by bluff upon bluff of ever-changing tints, the atmosphere, water and landscape vying with each other in beauty and ultimately blending into one harmonious, calm, neutral warmth, over

which the eye roams gloating and upon which it loves to rest in supreme content. Nor do the wrecks, which strew our path afresh, disturb the tone of fair repose but rather contribute to heighten the general effect. So enwrapped were we with this delightful picture as almost to overlook the character of the Argentine shore which has, in its turn, undergone complete transformation, disclosing vast forests, which extend as far as the sight can fathom, and enclose in their bosoms the solitary ranchos of the busy wood cutters.

At 9 a.m. we reached Paysandu, on the Oriental bank, a very busy thriving port, built on sand, but backed up by gently undulating eminences. This is one of the great centres of the saladero business; no less than 3000 hecatombs being here yearly offered up to Mammon; and so a short description of the objects and *modus operandi* of a saladero will not be out of place.

The great object of the saladero is to kill, and make use of every part of, horned cattle, for exportation alone; the flesh, hide, blood, hoofs, horns, sinews, bones, hair and fat, all have their several uses, but to salt the meat and convert it into *charqui* for the Brazilian and Cuban slave markets, is the main purpose to which all others are subsidiary; although of late years the production of artificial guano from the blood and offal has risen into very great importance. Saladeros are very necessary to aid in diminishing excessive increase, and their victims include not only cows, but mares, that are slaught-

ered for their hides, hoofs, hair and oil, and sheep for their grease, which is rendered down in the huge iron vats of the graserias. Such great care, intelligence and judgment, as well as capital, does the business however require, that perhaps more fail than succeed in it.

Three *corrales* (pens), the outer one the largest, the inner the smallest, are separated from one another merely by moveable barriers. The innermost suffices for barely a dozen animals and terminates in a narrow slippery passage, on the level of the ground of which travels a platform on sunken rails that leads internally to a couple of strong folding doors which completely bar exit. Round this small corral runs a gallery, connected with a bridge passing over and across the rails just above the folding doors. A pulley placed immediately beneath the bridge carries a long lasso, the noose of which is in the right and a coil in the left hand of the executioner, who stands on the bridge or any part of the gallery ready to launch his fatal missile upon a selected animal; whilst the other end of the lasso is attached to the yoke of a couple of oxen who stand ready with their driver behind the folding doors. The gaucho lassoes the beast, giving notice to the driver who instantly sets his yoke in movement to drag it on to the tramway platform as far as the folding doors beneath the bridge, on which stands the butcher directly above the animal. No time is lost in burying the long knife into the nape of the animal's neck, so as to sever the first vertebra; the deep thud of the stroke and the fall of the victim are simultaneous! The doors swing on their hinges,

the carcase borne along the tramway disappears into the interior, the exit is again closed, and the same scene is enacted with a celerity that is perfectly astounding to those who witness it for the first time. The operation thus far seems as perfect as possible, and by this means as many as 1200 cattle are sometimes disposed of in a single day, testifying sadly but vividly to the completeness of the control over inferior life, with which man has been mysteriously arrayed. As soon as the lifeless body reaches the interior, it is immediately bled, and the blood collected by drains is, with the intestines, kiln-dried and pressed into cakes as animal manure, whilst the offal is invariably thrown to a drove of pigs kept for the purpose, so that pork, as an article of diet, is generally eschewed in this country. The hide is then stripped off, salted and folded neatly, the body divided into quarters is hung up on tenter hooks and cut into thin slabs, and the flakes piled up in layers with salt between them. The whole process from first to last is one of marvellous precision, dexterity and speed, rendered necessary in order to salt the meat whilst it is still warm and quivering. Basques are now very generally supplanting the gaucho in this business and their skill with the knife is frightful to behold: in SEVEN MINUTES, the whole of the operations above recorded are completed, and what was a stately quadruped reduced by a fearfully quick analysis to its elements. The bones are subsequently steamed to extract the grease, the hair and horns stacked aside, the sinews and hoofs thrown into the glue-vat, and so every part of the once

noble animal goes to swell the purse of its slayer. The whole scene is a dreadful theatre of rank carnage, a true *Aceldama*, in which everything, even to the garments and persons of the workmen, is soaked in gore, whole obelisks of gory products assail the eye at every turn, and a sickening odour of carrion pervades the atmosphere for miles, whilst bloody streams are seen vomiting their contents to incarnardine, if it were possible, the otherwise pure bosom of the Uruguay. Such is the Saladero!

The low sandy shore of Paysandú facilitates commerce, which here partakes of an activity, quite unknown on the lower waters of the Uruguay, at least if we may judge from the busy motions of sailing and steam vessels, boats and numerous cargo flats, and the throng on the two moles. A large hotel with flaming announcements invites the traveller to shelter and good fare, two churches, one with very lofty towers, shed peace on the scene, and market, theatre, wide and well-paved streets, tramway and fine shops indicate a progressive tendency and wealth that raise the town to a high rank in the sister republic. Every hilltop is crowned with an estancia, and the neighbourhood is rich beyond compare with lovely estates owned by some of the wealthiest of our English community. The remains of the old dismantled fort shelled by the Brazilians in 1861 serve to record the fierceness of a struggle which has yet to culminate in the annexation of Uruguay to swell the already dilated maw of her imperial neighbour.

As soon as our engines stopped, we were again boarded by the Montevidean blue stripes.

Ten miles above Paysandú, the river expands into a broad belt clear as a mirror, in which the sky, distant foliage and hills are brilliantly reflected, the air changes and bathed in tropical fragrance and balminess, the intensely vivid verdure springs up magically around us.

Palms (*Cocos-Yatay*) now form the characteristic vegetation of the Entre-Riano shore: every eminence is crowned with them; grove succeeds grove, or rather forest forest, but always on high ground. The eye naturally turns to the sister shore to seek a corresponding landscape, but true to the law of divergence, which differentiates the two coasts throughout, not a single palm is there visible; bold rugged crags there are in abundance, through whose massive vitals the stream of ages has gnawed its path, and whose passage is strewn with their debris: abrupt bluffs covered with verdure, cattle and ranchos to the very edge, imparting vivacity to the picture; for however beautiful nature may be in herself, she is but a cold mistress and although commanding the admiration, fails to engage the sympathy of man, without evidence of his handiwork.

The river Uruguay is very badly buoyed its whole navigable length and in consequence, serious loss of shipping occurs; in time of war, it would be quite impossible for an enemy to ascend it when at all low: our pilot has to be every moment watchful and carries us from side to side, threading

daintily through the most intricate of channels, where great boulders and spits of sand continually threaten destruction.

At the junction of the Queguay, an Oriental affluent, with the main stream, which at this point has a breadth of about half a mile, are planted several *saladeros*, apparently hard at work; and whether the palms are scared by the scent of blood or refuse to witness the daily holocaust, certain it is that they here suddenly vanish from the scene. Twenty miles above this, rises a veritable *Tarpeia*, in the shape of a very lofty, bold, perpendicular-faced mass, jutting into the river from the Uruguay coast, and which, with a refinement of cruelty and a just appreciation of history, was actually used by a general, in one of the periodic revolutions to which this unhappy country is so subject, wherefrom to hurl his prisoners. Seen from afar, so sharp and clear is it projected against the sky, that I could not imagine the scarped headland other than a huge bastioned fortress with its corresponding earthworks; but on a nearer approach its architecture is seen to be not human. Two picturesque islands, circular, rising abruptly out of the water, apparently exactly equal in size and shape, and hence styled "*Las dos hermanas*" (the two sisters), stand as advanced guards to this precipitous promontory, and by their intensely green verdure to the river's edge and smooth mathematical uniformity, offer a pleasing contrast to the rugged, battered and blackened face of the cliff. Height succeeds height in long array, until at length, in front of a sheepstation on the

Oriental side, a bold, jagged, frowning, dark-as-ink ledge of porphyritic boulders (*Coralitos*) seem, as we advance, to stretch completely across the stream and bar our further passage: and on this lofty threatening reef lies exposed the torn and twisted iron skeleton of a once lively steamer: we hold our breath as with a quick turn and a dart through the seething flood, our clever steersman pilots us through dangers greater than ever Scylla or Charybdis offered, and leaves us at leisure to survey the prosperous cattle farms which, on both banks, now line our approach to Concordia.

At length about 5 p.m. after a passage of thirty-one hours and at a distance of 300 miles from Buenos Ayres, we sight the town of Concordia on the right bank and almost at the same moment Salto on the left which, rising tier upon tier, very much resembles Bath; these two occupy almost the same relative positions as Buda and Pesth on the Danube; and it is a curious fact that for 140 leagues higher up, where the river washes the shores of Uruguay, Brazil and the Argentine republic, the towns are likewise found in correlative pairs; and although there is much legitimate rivalry between them in honorable trade, each endeavouring to secure the river traffic at the expense of the other, they sink their mutual jealousy to hunt in couples a quarry of a different kind—smuggled goods—one vast nest of smugglers is this Upper Uruguay!

Along a ricketty landing stage, adjoining an unfinished screw-pile mole, and through the midst of exorbitant boatmen and noisy peons, we strug-

gled to reach *terra firma* in search of an hotel. Our progress was arrested by the Custom-house officials, and a large entomological case viewed with suspicion, but on being opened "Oh! I see" said the Mentor of the party "Dentistry," and so without ever having drawn a human stump, I was dubbed a dentist, to my great amusement.

Now it so happened that our arrival in Concordia took place in the midst of a week of fêtes, decreed by the governor of the province on account of the opening of a local Industrial Exhibition, and thither had flocked already thousands of people from Corrientes, Banda Oriental and Brazil. The whole town was agog holiday making, enveloped in a continuous display of bunting, illumination and fireworks, and as an Argentine, especially a Porteño never walks a yard when there is a carriage or tramway handy, we hailed a smiling Entre-Riano Jehu the owner of a coach of three-horse power, to drive us first to one and then the other of the two hotels, of which this borough of 6,000 inhabitants boasts, in order to obtain accommodation for a few days. However as our triple motive power sublimed, would only produce the form and muscle of one good English hack, and the vehicle might have been mistaken for the shade of Mr. Pickwick's immortal phaeton, our progress was slow and not hyper-agreeable, nor were our tempers improved by learning on arrival at headquarters that every bed, nook and corner were occupied three deep: well, after much ado they agreed to put up two bare cots for us in the comedor of the Hotel Otaño, so we credulously

believed something mighty advantageous had been secured. Our next fight was for dinner which issued in a general scramble for the viands amongst the hungry hundreds pressing forward with the same object: the waiters were bewildered and not less so the guests, and what with the shouting, hurrahing, ribald jokes and tremendous confusion, we had to be satisfied with a minimum of greasy, oily, rancid fodder, and some of the most detestable wine I ever tasted.

The dining room orgies were kept up till ten p.m. and rose to a pandemonium when *rouge-et-noir* commenced in the adjoining billiard-room: and to escape the heat, noise, and unsavoury odour of this unwholesome den, we betook ourselves to the Plaza, which was crowded with an exceedingly well dressed and courteous throng. In the centre of this fine public square, stands an elevated Corinthian column, surmounted by a life-size figure of Liberty, the whole bearing a very great general resemblance to a man in short trousers, as the architect has mounted it upon an absurdly diminutive pedestal. The whole neighbourhood was one blaze of light, in the midst of which, the Exhibition building, the central column and the Church shone with peculiar brilliancy by the aid of pneumatic gas. Two excellent military bands discoursed of music, and crowds of gay uniforms mingled amongst the gauzy, fluttering textures of the fair who, in Concordia, being in a minority of some 20 per cent., are eagerly wooed but with difficulty won. We longed for an ice to cool our parched throats and entered the only

confiteria of any pretensions : it appears, they had ordered the solid water from Buenos Aires, but on the journey, flirting with the ardent air, it had burst the rigid bonds of propriety and resumed its naturally loose and unrestrained condition. Balls, public and private succeed ; and the open windows reveal scenes of palpitation now and heartache to-morrow ; and so, amid a blaze of fireworks, in which the principal piece represented a terrible naval battle, we return to seek our catres : and on rising in the early morning, after a nightmare of discordant sounds, we have to thread our way daintily through transject bodies in every species of attitude, the landlord being specially remarkable as he lay coiled on the billiard table.

CHAPTER XXXII.

TRIP UP THE URUGUAY.

CONTENTS:—Site of Concordia—Business and Politics—East Argentine Railway, its present and future—A rural Exhibition and its products.

The town of Concordia is built entirely on gravel resting on sand, a bed of ferruginous clay, completely free from saline products, forming the sub-soil, and at almost every step, the foot displaces an agate. Situated on a gentle eminence, surrounded by undulating rising ground and having such a foundation, with a plentiful supply of the best possible water, the city must be healthy, as experience proves: however in the summer months, owing chiefly to absence of shade, the heat is such as to render life almost insupportable. The chief part of the business here is transacted in the early morn, and so does not come within the ken of the superficial observer, but not much commercial activity is visible at any time and a general lassitude seems to reign. The craving for political news is satisfied by three daily newspapers and one weekly; whilst two clubs, one senior and the other junior, were flourishing until lately, when they resolved to amalgamate, a step which ended in disagreement and the ultimate disruption of both; the only instance on record of a want of concord in the inhabitants of Concordia.

From its junction with the Paraná, the Uruguay is navigable at all states of the tide as far as Concordia, but some miles above that city occur the Falls of Salto-grande and numerous rapids which render it unnavigable to steamers from below, except in times of extraordinary freshets between which an interval of years sometimes elapses; whilst above these, although still sown with rapids, the river is navigable, but to vessels of smaller draught; so the East Argentine Railway was constructed by an English company to release traffic from the thralldom of riverine obstructions, and at the same time develop commercial relations with the southern provinces of the Brazilian empire. This railway whose handsome terminus is a great ornament to the town of Concordia, as yet projects its iron tentacles no farther than Monte Caseros, a distance of a hundred miles, which no doubt is but an instalment of a vast undertaking that, by extending the company's rails to Paso de los Libres, a Correntino village lying directly in front of the imperial town of Uruguayana (which formerly belonged to Montevideo), and thence skirting the river in a N.E. direction to San Tomé, finally intersecting the isthmus in a due north line to Itapua, will not only tap the rich trade of austral Brazil, a region where tropical productions luxuriate in wonderful profusion, but by uniting the Uruguay and Parana will create such a traffic as will speedily render the directors at home independent of tardy government guarantees. The home administration however, backed up by the very intelligent zeal of

its resident officials, seems quite alive to the present as well as the future of this interest, and as the river above Monte Caseros is navigable into Brazilian territory, already its steamers plough the waters thereof, in their busy search amongst the riverine towns of Itaquí, Asuncion, Uruguayana, San Tomé, &c. for cargo and passengers.

The East Argentine Railway, I confess, astonished me in many ways; its buildings are commodious and massive, the road is well-planned and exceedingly well-laid and being ballasted in gravel, eliminates completely that terrible dust which on all other lines is so unpleasant; the carriages are fitted with every modern improvement, and in the family coach, a jewel of an apartment, supplied with couches and tables, home is simply transferred to the rails; and as the Indian sun-hoods although sheltering completely from direct rays, admit free ventilation, and the central buffers contribute to ease of motion, whilst a plentiful supply of refreshment can be obtained at every station along the line, the discomfort of travelling is certainly here reduced to a minimum. Native wood is much used in the construction and repair of the rolling stock, and the work, both in wood and metal, turned out of the company's shops adjoining, could not be surpassed. It afforded me intense gratification to find English intellect and energy so ably represented in these distant parts.

I was very anxious to witness what kind of a display a district so remote, and with such a sparse population, and relying upon native products alone,

could exhibit, and so entering the Rural Exhibition building I visited first the enclosure, occupying about two acres, which was devoted to manufacturing industries, whose sides were lined with covered stalls, flanked by a broad pavement laid with Roman cement. Here were exposed, all kinds of Potteryware; leather work; native drugs; castings in iron and bronze; tinwork; an ærolite weighing 353 lbs.; a very fine collection of sixty specimens of native woods; castor oil exhibited by an English gentleman who tills 500 acres of it, the plants growing wild throughout Entre Rios, succeed admirably under cultivation; silk (the gem of the Exhibition); an ingenious apparatus of wood, cords and sacking for floating over rivers; beers, wines and liqueurs; magnificent needlework, a speciality of Argentine lithe fingers; very elegant and skilful ornamental work made from the *espigas del maiz* (maize ears); *fideos* (vermicelli and macaroni); soaps and candles; wools; fancy crochet and netting; lithographic and type printing; a vast collection of agates, fluor-spar, rock-crystal, and rare stalagmitic stones enclosing water; petrified remains chiefly of wood, but including the exceedingly remarkable one of a cayman's egg, in layers fitting one another accurately, exactly like very finely turned Chinese ivory boxes; an inlaid marble table; dried meats; a *lusus nature* in the shape of a steer's horn a foot in diameter at the base; tobacco, wheat and maize; cheese; confectionary and a pyramid of biscuits worthy of Huntley and Palmer; glue; a multiplex machine capable of performing all the varieties

of labour done under the sun ; a gas making machine ; a handsome dogcart, escritoire and lounging chairs made of native woods, of exquisite grain, hardness and polish ; hair-work ; oil paintings *not* resembling the old masters ; and lastly an old 18-pounder iron gun fished up from the River Uruguay, into which, with nine others, it had been pitched by Garibaldi in 1840, when attempting to cross the Salto grande rapids.

I next visited the Zoological section, where evidence of the improving taste of breeders was not wanting : Prize Durham bulls and blood Horses, Southdown, Lincoln and Rambouillet sheep, here attract as much attention as at home ; whilst Dorking, Polish and Spanish fowls, with Dogs principally of the terrier breed, divide the attention equally with Nature's offerings, the carpinchos, eagles, and the smaller wild birds to be viewed in tasteful aviaries.

The potted plants were so exquisitely arranged as to secure an immediate purchaser from Buenos Aires.

Altogether the native exhibition at Concordia gave me a high opinion of the resources of the district as well as of the intelligence, taste and industry of its inhabitants.

CHAPTER XXXIII.

TRIP UP THE URUGUAY.

CONTENTS:—Intense heat—A week's sojourn at Gualeguaycito—A ride to the Uruguay—A visit to Robinson Crusoe and his lovely island—Snail eating—Carpincho and Kingfishers—Home-made canoes—A brace of brave dogs—Fauna and flora of the island—The ancient lady of the isle—Her fondness for caña—Charon asleep—Salto grande—A picking-up-old-rail train—A patriarch—Milk and caña—The locomotive cicada—Garibaldi's cannon.

In order to escape the unmitigated heat of the city and at the same time prosecute the main object of our journey, we determined to spend some days in the country districts and accordingly pitched upon Gualeguaycito, the first station on the East Argentine railway, distant from Concordia about twenty miles, to reach which the line passes here and there through natural palmgroves. The station-master, Don Javier Geisseler, a Swiss, aided us in every way, by placing at our disposal a room and horses, giving us directions as to localities and lastly feeding us. The station at Gualeguaycito lies in a romantic basin, backed up by vast downs intersected by *cuchillas* (ridges), which have very much of a Brighton air about them, and rest on the same geological formation as Concordia, gravel, sand and red clay. In the adjacent montes of Tala, Espinillo

and Algarroba are many lakes and arroyos whose waters are literally filled with various species of Carp (*Cyprinus*), whilst the air is alive with the Euryades, and the Palm beetle (*Rhina barbirostris*) is not uncommon.

One day taking horses and accompanied by a retriever and mastiff we started for a ride of two leagues over a succession of swelling hills to the banks of the river Uruguay, which here forms a noble swift-coursing stream of about a mile or more in breadth. Leaving our horses at a solitary estancia and entering a monte of ceibo (*Acacia ceibo*), with its handsome scarlet flowers, we stand on the brink of the river which, flowing beneath us, is strewn with hissing rapids, owing to its shallowness and bed of boulders. Directly in front and hugging the Montevidean shore, lies an island about two miles long, inhabited and owned by a Robinson Crusoe and his dusky wife and thitherward are we bound, if we can manage to make the solitary pair aware of our existence. In the midst of a dense wood of Lapacho, Algarroba, Tala, Cañar and Palms which completely envelops this Fernando Po, one can just desery the wood cutter's rancho. We hoist our standard, a white pocket handkerchief, and view-hallo till we are hoarse, and in the course of half an hour have the satisfaction to find we have been heard and to see a canoe put out and creep up the opposite shore to escape the strong current and the breakers: and in the meanwhile setting to work to explore the woods, many rare forms of larvæ present themselves on the tree stems, besides two

or three specimens of a giant *Ampullaria*, left on the banks by the receding tide, one of which measured four inches across the mouth. The *Helicidæ* or land snails are very widely distributed in genera and species over most of the eminences throughout the Republic; and one genus the Caracol is eaten in large quantity in Buenos Aires: indeed I knew one respectable young man whose custom it was to visit the chief cemetery of the town to gather and devour them raw; nor is it wonderful that these gasteropod mollusks, seeing that they are phytiphagous, should in the ancient "cochlearia" as in the modern "escargotoire" be fattened for the table.

A splash attracts our attention and looking round I half expected to see the gambols of the elegant porpesse, but instead thereof appeared the rolling gait of the unwieldy Carpincho (*Hydrochaerus capybara*), who however is a splendid diver and swims remarkably well; and then just skimming the water a most lovely pair of dark-green Kingfishers with snowy ruffs (*Megaceryle torquata*) dart by, unrivalled as pescadores, whilst aloft sails majestically the Jote (*Cathartes ferox*): thus employed, up glides silently the homemade canoe, with a shaggy, hoary ancient, paddling from the stern. This canoe was hollowed out from a single trunk of the Timbo and measured 25 feet, seating six persons comfortably; others up to 50 feet and capable of carrying four tons are obtained in a similar way from the same source, and very dry and comfortable water-car-

riages they make. So embarking with our Lares, in the shape of wine and caña (white rum), the latter as a present to Mrs. Crusoe who, we were told, was inordinately fond of it, we pushed off, making the dogs swim, and very bravely and strongly they battled with the breakers, reaching terra firma as soon as we, in spite of the very strong current and dreadful surge. Landing on the island, the change is at once remarkable as we seem suddenly to burst into the tropics; in fact the islands of the Uruguay differ completely from those in the Paraná, in soil, vegetation and appearance: the soil being less clayey and more arenaceous and sometimes even rocky, whilst the Palm (*Cocos Australis*), the Bambo, the Inga (*Inga Uruguayensis*) and the Ceibo (*Erythrina cristagalli*) &c., here intermingle with their more hardy mimosa brethren the Tala, Chañar, Algarrobo, Quebracho, Virarú, Ñandubay &c. The lofty palms survey the lesser trees struggling to free themselves from the terrible hug of the sturdy epiphytes (*Lianæ*) which, mounting to their summits, throw off, in the exuberance of their joy of conquest, oceans of vivid flowers; then in the wantonness of mirth twisting and interlacing with each other, suddenly let fall their arms to the ground, take root, and become sober. These ropes, for such they resemble, some in fantastic form, others perfectly perpendicular, depending 50 to 80 feet, suggest one use for which they are probably intended and instinctively our eye wanders in search of the cousin of man. Here however,

he is not, although the "*Stentor Caraya*", as well as the "*Hapale pencillata*," is found on the shores of the Upper Uruguay; but in his place are the Puma, Jaguar, Cayman, Carpincho, Gato del Monte (*Felis Geoffroyi*), the more peaceful and elegant Curassow, the Pavo del Monte (*Crax alector*), various species of Carpinteros (*Picidæ*) amongst which the hoary-headed "*Leuconerpes candidus*" is conspicuous, Rhopalocera of brilliant hues including the sedate sailing *Euryades*, and beetles innumerable, especially of the families Lamellicornia and Longicornia. If above be a tangled mass of vegetation, what is it below and around? The "*convolvulus maximus*" and a thousand other creepers enlace their vines to prevent the unwary intruder from invading their domain, whilst several species of Bignonia, Passiflora and Asclepia, besides multitudes of epiphytic orchidaceous air-plants the Epidendrum, Oncidium, Ophrys and Serapia, as well as the elegant Bromeliaceæ so common on the windows of most houses in Buenos Aires, rapturously yield bouquets of exquisite perfumes. Straight from the snows on the Andes, the scene to me was ravishing. The fruits of this island are delicious, especially some of the uncultivated; one in particular, from a species of myrtle (*Eugenia uniflora*), jet black, of the size of a cherry but with a kernel like a nispero, was most luscious and from which Crusoe extracts a by no means despicable wine.

We now present ourselves to the ancient lady of the isle and her joy was inexpressible when

she beheld the coveted bottle; she declared her alliance with Europeans by descent, although the old sinner was as black as a coal. After a breakfast of stewed charqui (*sundried beef*), with abundance of vegetables and fruit, washed down by our own wine, we took a stroll through the island, returning with many bruises, scratches and sunblisters, but repaid for all by a bag of rare forms. During the two short hours of our absence, our hostess had drained the caña bottle and begged us as a favour to return on the morrow with a fresh supply. The trip cost us nothing but pleasure save the small fee to Charon who, on our wishing to return, was found asleep at the other end of the island. The people here live by cutting wood and shipping it down the river, but as the loaded lighter has been anchored for a year and a half, without being able to shoot the rapids below, it can scarcely claim to be a lively business: yet, as their wants are few and nature has provided them gratis with fish and flesh in abundance, besides vegetables, fruits and tobacco, their existence is far from miserable. After the delay of an hour, the sleepy boatman made his appearance, and bidding adieu to Madame, who was now in a state of decided incapacity and incoherence, we pushed off, the dogs following as before. When about half way across, the latter, which had struck out too far down the stream, became engulfed in the breakers and we gave them up for lost; our joy therefore only equalled theirs when, on landing, the faithful creatures came bounding towards us.

Our horses were ready and under their sure guidance we reached the station exactly at sunset, after spending one of the most agreeable days I ever experienced.

Two leagues below the spot where we crossed to the island, lies what is called the Salto grande (large falls) and to this on another occasion we directed our steps.

As remarked a few pages back, the navigation of the Uruguay as far as Concordia and Salto although difficult is not insuperable, but above that point, these falls commence the series of rock traverses, obstructions that render further advance impossible to steamers from below save in the short periods of very high water and then only to be probably entrapped. Many are the schemes for the improvement of the Upper Uruguay, either by dynamite or canalization, but engineering works of that nature seem to me almost useless on account of the meagre flow of water; the question therefore, chiefly on account of the jealousy of the three powers interested in its navigation, will most likely resolve itself into calling in the aid of the railway on both banks, as has already been partially done on the Entre Riano side. A canal round these obstructions and passing entirely through Argentine territory has been opposed by Brazil for obvious reasons; but one of 30 miles across the narrow neck of land which joins Misiones to Corrientes has been mooted and which, uniting the waters of the Paraná with those of the Uruguay, would swell the volume of the latter

so as obviate some of the difficulties, but a considerable difference of level would necessitate the inconvenience of locks.

On this our visit to the falls, the East Argentine Railway authorities were good enough to allow us to make use of a special picking-up-old-rail train, which landed us within a league or so of our destination; and distressed with the heat we sought a neighbouring solitary rancho for shade and refreshment. A hoary-headed patriarch, wife and stalwart sons received us with such natural grace and true hospitality as might have characterized the days of Abraham: they had but little, but that little was at our service and consisted of eggs and milk; and when we proceeded to qualify the latter with caña (white rum) after a good old English fashion, our hosts stood aghast, declaring the mixture to be rank poison: I verily believe they expected us to drop down dead after quaffing the nectar. And here it was my friend first heard the Cicada in all the plenitude of its shrillness. The males have a musical apparatus beneath the wings, on the basal ring of the abdomen, which acts like a kettle drum, but how these creatures, scarcely more than an inch and a half long can, with this tiny apparatus, produce a whistle that can be heard a league off and exactly resembles that of the locomotive, passes my comprehension: if it be used as a call, then must their mates be stone deaf. Times out of number was my companion deceived, expecting, to see the train appear; and subsequently in my journey farther north at a time of complete exhaus-

tion from excessive travel, and at a dreary spot far removed even from roads, I cheered the drooping spirits of an assistant, fresh from London, with "Come let us hurry up! don't you hear the railway whistle?"

From the marvellous accounts I had listened to, I expected to behold in these falls another Niagara, but great was my disappointment on viewing them for the first time, for although very picturesque, they struck me as completely wanting in the grandeur with which my imagination had clothed them. Extending for about a mile longitudinally they consist on the northern limit of a transverse bar of boulders which cause a perpendicular descent of about twenty-five feet; then a succession of rugged rocks, sometimes of very fantastic shape, piled Pelion on Ossa, amongst which the river surges and eddies. The reef spreads completely across the river, a distance of about a quarter of a mile, so that in some states of the tide, it is possible to pass on foot from Entre Rios to the Banda Oriental, at all times a difficult nay dangerous undertaking. An island formed of massive boulders occupies the centre, on which a few dwarfed trees struggle for an aquatic existence. Here are found splendid agates, blocks of rock crystal, amethysts and other precious stones; and there lie naked on the blistering rocks, those rusty and silent mementos of Garibaldi's unsuccessful expedition in 1840 when, to cross the rapids, he was obliged to throw overboard ten eighteen-pounder iron guns.

By contemplating the scene however it grows

in magnitude and sublimity: the vast disintegrating force at work for so many ages to accomplish such disruption; the blackened, frowning, serried, rocky masses; the everflowing tide, now gliding smoothly and forming placid pools, now seething, eddying, struggling into force; the story of the gaping ordnance; the knowledge of what that harmless-looking stream can do when, as sometimes, rising fourteen feet in a single hour, it sweeps everything before it to destruction; such thoughts chasing one another through the mind, produce that exquisite melody of soul, always felt by the sensitive in the presence of vast geologic record when, attuned to the scene, it melts away in secret rapture.

CHAPTER XXXIV.

TRIP UP THE URUGUAY.

CONTENTS:—Concordia and Salto foster-sisters—A comparison—Salto a land of agates—Water stones—South American Missionary Society's Church and School—North-Western Railway—A bull-fight—The Governor of the Province the Grand-Master—An inhuman farce—A youthful matador and his reward.

As Concordia and Salto are foster-sisters, and as from almost every point of the one, the glistening whitewashed structures of the other are visible across the river, the traveller must needs visit both, especially as a small but commodious and speedy steamer plies hourly between them. He will find however, considerable points of difference in these two contiguous towns, as well as in their inhabitants. In Concordia with a census of 6000, there is more enterprising industry, but less appreciation of education, than in Salto with its 9,000: whilst the former has its tramway and abundance of hack-coaches, neither the one nor the other as yet exists in the latter, although Salto has a High Street a mile and a half long beautifully macadamised: its fine stores too, stocked to the roof with all kinds of merchandise, certainly indicate a desire to do business, but customers and money are scarce, and the

shopkeepers avow that they do not cover expenses. Salto is built more compactly and occupies less ground than its rival and its buildings have some pretension; Concordia is a straggling town with no architectural ambition whatever; and yet both are picturesque. The hotels in Concordia however bear no comparison with those in Salto, the Concordia and La Paz in the latter city, are quite equal to anything in Buenos Aires, as regards accommodation, cuisine and wines.

Salto is built upon the same formation as Concordia, but is richer in minerals: walking on the outskirts in pursuit of the railway station, I was surprised to find whole walls built of nothing but fine agates many of which weighed 25 lbs. and from whose crevices I picked with a penknife good specimens of rock crystal; the whole district is strewn with amethysts, garnets, chalcedony, cornelians and seems indicative of further adamantine treasure. A German house has established itself here in order to collect and dispose of mineral rarities, and employs bullock-carts which regularly visit the Brazilian frontier about 150 miles distant to bring thence a vast display of natural curiosities; but on visiting their depôt, I found little else than magnificent specimens of spars, including Blue John, rock crystal, very fine garnets and amethysts, and a stalagmitic natural phenomenon, in the shape of water-rounded carbonate of lime stones completely enclosing water, so that they can be shaken about like a Toricellian hammer, the whole being beautifully translucent and very plainly exhibiting the impri-

soned liquid, which is said to be extremely poisonous.

We visited the pretty little English chapel whose maximum congregation consists of seventeen British subjects, and the adjacent school of sixteen pupils, the whole under the direction of the South American Missionary Society's able clergyman, the Rev. Mr. Sheills: in fact, the number of schools in Salto is prodigious, and yet notwithstanding its love of education, there is a general languor about the place indicative of gradual subsidence to a fate similar to that of Genoa and Venice, as foreign enterprise in Concordia is rapidly taking the wind out of its sails in the matter of traffic with the Brazils, to which it owes its very existence. The North-Western Railway, from Salto to Yacuí, is as yet a very feeble attempt to grapple with the difficulty, but there are rumours that in very despair it is about to be prolonged to Santa Rosa on the Brazilian frontier, in order to cope with its trans-Uruguayan neighbour.

Returning to Concordia, I was just in time to witness a bull-fight. The Governor in his laudable desire to provide amusement for his loving lieges during the eight days' feast, had invited a company of Catalans, professed tauromachists, from the Montevidean side of the river, to exhibit their prowess in an open-air circus, erected for the occasion. The Governor himself acted as Grand-Master, and by means of his herald, gave the "*laissez aller*" on the noisy trumpet. Curiosity led me to pay my dollar and a-half to witness the

degrading spectacle, which has been so often and so vividly described. In the hastily constructed enclosure were gathered perhaps 500 persons, including two or three women. In came the company of seven, two picadores on horseback armed with long goads, and five matadores on foot, dressed all "*en regle*" as may be seen in pictures, making the while profound salaams to the Governor and the other spectators. Before the bulls, of which there were six, were let in singly to the arena, they were well goaded in their stalls to make them savage and finally to the sound of the trumpet and in the presence of the full company, one victim was introduced, which the two picadores confronted and endeavoured to provoke to combat. When the bull advanced feebly, they stuck their pikes into its forehead and the continued repetition of this torment at last roused the animal into something like rage. One of the horsemen missed his stroke and the bull seizing the opportunity, made a rush at his horse, goring his flank with an ugly gash. The five matadores now advanced to the encounter, dancing frantically, shouting, whistling, and flourishing coloured cloaks in the poor beast's face, in order to urge it to charge them: but immediately it threatened so to do, its tormentors darted nimbly behind wooden recesses, which resounded at times with the headlong charge of the heavy animal. Five of these partitions were erected round the ring, sufficiently wide only to admit a man. As with all their efforts, the sport was slow and the bovine dander difficult to excite, one of the matadores

issuing from his place of concealment, approached the victim with two doubly-barbed darts, in the body of which moist gunpowder and crackers were inserted. His fellow-baiters attracted the bull's attention whilst he quickly drove the cruel fiery spikes into its neck and shoulders and what with the pain, noise and smoke, the poor beast was without doubt rendered infuriate, but even then not vindictive. Matters were now ripe to exhibit the dexterity of the "primer espada," who entered the arena alone, armed with a long sharp sword and a piece of red rag suspended from a staff, which he proceeded to wave in the bull's face. The animal refused to show any but the feeblest ferocity, and on one of these occasions, making a timid advance upon the rag, the bull-slayer stepped on one side, drove the glittering blade through its heart and thus put an end to the inglorious tournament. The remaining five showed even less pluck than the first and after tiring the patience of the spectators had to be lassoed, dragged out and killed. The whole affair was an inhuman farce from first to last, and the contempt of the lookers-on was by no means sparingly expressed by cries, jeers and jokes. The men though heavy were doubtless quick on their legs and their skill in administering punishment was only equalled by the nimbleness with which, on the first appearance of risk, they sought their retreats: but with such peaceful victims, very quakers who gazed mildly in the face of their tormentors and whose passions nor goad nor powder could arouse, no person with a spark of nobility

in his nature could view without pain what was simply a case of wanton and brutal torture unaccompanied by danger. The last act however of the entertainment introduced a little more life: for having sawn off the points from a steer's horns, he was introduced into the area, to provide amusement for the youthful idea of Concordia. About half a dozen boys were instructed by the bullfighters and pitted against the four-year-old, which they began to irritate in the customary fashion: but young blood is hot and so very shortly up went the tail of the animal as it made a rush at one of its tormentors, who speedily found himself turning a somersault in the air to his intense astonishment and dismay. The young bull was about to try the same successful game on a second of its youthful antagonists, when with a skilful jump aside, this tiro of twice six summers, avoided the threatened toss and at the same instant buried to the hilt a straight sharp sword in the very life blood of his assailant, which instantly sank to rise no more. The vivas, which greeted this daring act in one so young and perfectly unaccustomed to the ring, were deafening; and the appreciation of the audience from the Governor downwards was further testified by raining down upon the youthful gladiator such a shower of silver that his two hands united scarce sufficed to bear away the heap of Bolivianos; to which was add the carcass as spoil. With this the function ended and I was glad to breathe the purer atmosphere without.

CHAPTER XXXV.

TRIP TO RIOJA, CATAMARCA AND TUCUMAN.

CONTENTS:—Leaving the city of Doctors for the city of Mines—Taking gradients—A train driven by its own momentum—Giant cactus—The boom of the Suri—Station of Recreo—Manna in the desert—Barren fauna and flora—Spanish definition of Rabbit—The remarkable tree “Palo Borracho” sacred to Bacchus—Cochineal and its value—A three days’ journey over a sandy desert—Danger of imitating Jezebel—Prickly pear syrup—St. John’s bread—A droughty basin—Represas—Uninviting caravansaries—A recovering spiral—Rioja à la Silhouette—Rioja helots—Facundo Quiroga—A story of the Tiger of the Plains—Lopez Jordan and his assassinations—Rastreadores and their skill—Of what use are Donkeys? enquired Spice Hazeldeane—Oranges, grapes and wines—Description of a lodging-house in Rioja—Cucurried—A model Governor—A project for developing the mineral wealth of Famatina—A novel method of chiming—Horror of bees—The leaf of the Tala an antidote to drunkenness—Republican caste.

The termini of the Central Argentine and Tucuman lines being now united in Cordova and the trains so arranged that the traveller, half an hour after his arrival in the latter city, may proceed forward and reach Tucuman in four days from Buenos Ayres, I lately availed myself of this accommodation to visit Rioja, Catamarca and Tucuman, my principal object being to inspect the rich mining district of Famatina, lying in the northern part of the first mentioned province. So starting from Córdoba, and taking a ticket, at a cost of £2 10s., to Recreo, a station half way on the Tucuman line,

and distant one hundred and sixty miles from the city of Doctors, I quietly resigned myself to the twelve hours' tedious journey.

After the first few miles, the country through which we passed became completely devoid of interest, owing to its presenting to the eye nothing but a barren waste, so I sought amusement by taking the gradients, which are heavy for the first half of the distance, the line rising continually up to a height of 2,600 feet above sea level when within about 90 miles of Recreo; after that it descends uninterruptedly by gentle inclination, enabling the train to run the whole of the remaining distance by its own momentum alone; and on nearing our destination and passing through scattered woods of giant cactus (*Cereus*), fully twenty feet high, and the home of the Rhea, whose Indian name is Suri, we were greeted with her musical boom which, once heard even at the distance of half a league, is never forgotten.

The station of Recreo, in the province of Catamarca, is situated on the borders of a very extensive salina 300 miles long, across which the railway cuts for a distance of 22 miles, and as the passengers proceeding to Tucuman have to spend the night here, a large hotel has been erected for their convenience, where the charge of 15s. a day though high cannot be considered exorbitant, as everything even to a drop of water has to be brought either from Tucuman or Córdoba. From this point are discerned the Sierras both of Rioja and Catamarca.

The next morning I took a stroll with my gun fully expecting to meet with some game, but scarcely prepared to find the spot barren to such an extent both in fauna and flora; for although the fine Hare-like tailless Cavy (*Dolichotis patagonica*), and the wary Bustard-like Chugna Burmeisteri are found here, nothing was seen but, indistinctly in the distance, what I took to be cavies, but which the people both here and throughout the Republic dub Conejos (rabbits): in fact, the Spanish language possesses but little exact distinctive Zoological nomenclature, which makes it exceedingly difficult to obtain clear description from native sources.

Proceeding over some low hills, a most peculiar-looking tree presented itself, which the natives call the Palo Borracho (*Chorisia insignis*), but the Indians, Yuehan, standing about 50 feet high, and spreading from the crown branches covered with digitate leaves, dotted here and there with large white flowers, whose naked stem before branching expands into one immense egg-like form fully 20 feet in height and 24 feet in circumference, sounding hollow when struck, and whose bark is covered with short hard quadrangular blunt spines: the specimen I here saw was certainly full-grown, and this remarkable tree is only found on elevated rocky ground. The inhabitants both in this Province and in Santiago scoop out the soft spongy centre and use the hollow barrel-like stem as a storehouse, whilst in some parts of South America these said stems are cut in half and form capacious Dutch-

like canoes. The seedpods, likewise of an eggshape, and about the size of the human fist, contain abundance of cottony fibrous down, from which are manufactured cloth, candle-wicks and pillows, which latter, besides being delicately soft and springy, have proved beneficial to consumptive patients: when they get matted, exposure to the sun soon renders them once more puffy and elastic. The cacti, especially the *Tricomaria usilla*, I could not behold without wonder, veritable trees with spines a foot long, and from some of the *Opuntia coccinelliferæ* gathered the eggs of the cochineal, which when squeezed stained the fingers with a dark crimson fluid: the natives collect and call them "grana," making them up into dry compressed cakes, weighing perhaps half a pound, and which they sell for a dollar (3s.).

After two days' rest at Recreo, I booked thence to Rioja distant 53 leagues by road, although only 40 as the crow flies, over perhaps the worst piece of ground a traveller could find in either hemisphere: the government engineers have indeed chalked out a direct line, but it awaits construction. The fare was £2 10s., allowing 50 lbs of luggage free, but taxing to the utmost everything else even to the very provisions carried in the hand; and this is a consideration, as it is absolutely necessary to take both food and drink for the three days' journey over nothing but a sandy desert, in which scarcely a blade of grass is visible, and where the *postas*, generally dilapidated *ranchos*, are utterly unprovided with the barest necessities.

The road, which is only just broad enough to admit the lumbering vehicle, winds the whole distance through *espinosa* thickets, amongst which the *quebracho blanco* towers; and battered every moment by the formidable thorns on either side, it becomes dangerous to put a head or even a hand out of the window. At the first Posta out of Recreo we breakfasted, and here are plantations of Prickly Pears, from which the inhabitants make an excellent "arrope" or thick syrup, which is very palatable, having the combined flavours of many fruits especially raspberry, but intensely sweet: it forms an article of food in the neighbourhood: but the tuna does not thrive well in Rioja. Outside the posta we found little stacks in the form of conical mounds about four feet high made of bush wicker work and filled internally with Algarroba seed (St. John's bread), another of their favourite aliments; in fact were it not for the generosity of nature, the inhabitants, biped and quadruped, of these desert districts, would starve. Water again is very scarce along this route; in this posta the well is 150 feet deep, but such a thing is unknown in Rioja or at any other of the scattered dwellings on the road thither; although it is my opinion that these dry upper provinces might obtain water and be rendered productive by the erection of Norias;* but the people are too poor and unenterprising to

* The Noria consists of two upright blocks of masonry, surmounted by an arch on which rests a cistern, the whole placed over a deep well, and an endless chain with buckets attached after the manner of a dredge is kept in constant motion by a mule.

attempt such a method of relief. In fact, here as in all the provinces hemmed in by lofty mountains running meridionally on the east and west, the damp winds both from the Atlantic and Pacific are intercepted and made to distil their contents on the sides remote from these hill-locked districts, hence their extreme dryness. In summer however, rain does occasionally fall and this is evidently due both to the deficiency in altitude of the eastern intercepting chains, and also to the increased height of the strata of air of sufficiently low temperature to condense their vaporous load, so that the rain-laden Atlantic clouds are allowed to flow over them before being precipitated in the form of rain. So precious is water indeed, that every dwelling has its "represa" or well-puddled reservoir with high earthen banks to collect the rainfall from the higher grounds, and this being the only source for twelve months' irrigation and domestic purposes, travellers have always to purchase the right to taste the fluid; but even then it required the pressure of extreme thirst to enable me to sip a few drops of the nasty fœtid liquid from a Camarina that needs no stirring. Towards the end of the first day, we pass sierras in the province of Catamarca, and in front and on the right they accompany us throughout the remainder of our journey. Although at the postas, which are usually six leagues apart, fresh relays of horses or mules are in readiness, nevertheless a loose troop with their *madrina* (mare wearing a bell), is always driven in front of the diligence, so that every two or three leagues the

teams are relieved, five or seven animals being in harness at one time, according to the state of the roads, and each with its outrider; the troop is under the charge of a muleteer, who wears a broad flap of hide fastened on each side in front of the saddle to protect his legs, as he dashes through the thorny bosquets in pursuit of some members of his family that, disobedient to the bell, will persist in straying. The first day we made 28 leagues, and at night slept in the diligence, by no means comfortably, but it was a case of Hobson's choice, as the *postas* afford no accommodation whatever, no food, no beds or even chairs or tables, and withal are excessively dirty hovels. The next day was but a repetition of the first, but at night arriving within six leagues of Rioja, we stopped at a good house and forthwith I fixed up my portable *catre* and enjoyed refreshing rest. Now came the worst part of the road in which I fully expected momentarily to be upset, but the beautiful recovering spiral which these vehicles trace, reminding one of the nasty Atlantic roll of the narrow-built steamers of the present day, has in it less of danger than discomfort, owing to the speed at which they are driven; as in the case of a wobbling spinning top, they have no time to fall. However we reached Rioja in safety at noon of the third day, one of the greatest plagues of the journey arising from the dense, impalpable dust which penetrated everything.

To describe Rioja can only be done effectively by one great negation: it must be painted *à la Silhouette*, as it is in reality but the shadow of its

former self. Perhaps no other Argentine town approaches it in dreariness nearer than San Luis; and yet on casting a glance around, there evidently was a time when wealth, taste and refinement characterized it. History tells us that at one period the land was a blooming garden, that anterior to the opening of the Tucuman railway, Rioja was comparatively flourishing, exporting wines and fruits in abundance, especially the most magnificent oranges which she poured in millions upon the more southerly provinces of the republic; but now, such supplies coming from Tucuman, Rioja is left without the means to meet the expenses of irrigation, and rapidly returning to the desert whence she sprang, is destined to be silicated in her own sand. What her orange groves and vineyards once were, may be gathered from their foot prints which still shed here and there spots of intensely vivid green in the midst of almost universal sterility. If the exterior of the city yields unmistakable evidence of ruinous decay, not less so does the interior. Only two respectable public structures adorn her streets, the Cabildo and the National College, the former for the administration of justice, the latter for the promotion of learning; all others bear the mark of early dissolution, and as for the churches, on which Christians usually lavish decoration, three or four barns do duty for them; the floorless, windowless dwellings are built of sundried bricks; and a brace or two of wretched stores that but once a year replenish their motley stocks, with perhaps twenty carts to aid in the sleepy loco-

tion, give a semblance of vitality ; no movement, no commerce, no hotel, not even a fonda, none but a very miserable and scanty pavement to the sandy streets, no glass and lastly no barber to free the matted locks of the dusty traveller, a fact that may account for that universally hirsute and grisly aspect which the Riojanos present in common with those Easterns that forswear the razor.

The future of Rioja must depend upon agricultural and mining industries, but before the former can recover its pristine importance or rise to that prosperous condition for which its granitic powdered soil so eminently fits it, a proper method of irrigation, such as that perfected in Mendoza, must supplant the present worthless system ; and as for the latter, although its sierras are literally teeming with mineral wealth, practicable roads are absolutely necessary ere the search for treasure can be profitably prosecuted.

The population of this sad capital amounts to about 4,000, the majority of whom are maintained at a point just above starvation by some mysterious process : as a people they are sober, quiet, hospitable and polite, but to a degree *triste* ; they tell you they are not gaucho and you need not fear them, which is true, as it is quite safe to go unarmed anywhere in their midst ; yet let the tocsin of political strife be once sounded, then under the guidance of a leader in whom they have confidence, they become demons and no excess is too extravagant, otherwise they are as obedient and servile as helots ; politics indeed have been the bane of

Rioja as of most other Argentine towns, especially capitals, and the inhabitants themselves are the first to admit it. Such a leader as has just been referred to was Facundo Quiroga, a Riojano, who for his bloodthirsty barbarities was justly styled the "Tiger of the Plains," a wild beast, whose life would yield abundant matter for one of the most thrilling of novels. This monster, who was only possible in such exciting political times as those of Rosas, held undisputed sway over the northern and central provinces of the Republic, principally by acting on the fears of a very superstitious race: without doubt, as in the case of all men who rise to command and are able to maintain it, Quiroga, although only a fierce, fearless, uneducated Gaucho, possessed a remarkable insight into the motives of human actions, and was thus enabled to penetrate disguises and unmask artifices, with an ease which appeared nothing less than miraculous. The following story, out of a multitude that are current in the neighbourhood of Rioja, might be a chapter culled from the life of some Sedar of India.

In a certain company of his soldiers, a robbery had been committed and the culprit could not be discovered. Quiroga paraded the troop and had as many equal twigs cut as there were soldiers, distributing one to each; then [advancing to the front, he called out in a stentorian tone, "The man, whose twig by to-morrow has outgrown the rest, that's the thief!" The following day the troop was again formed, and Quiroga proceeded to compare the twigs; one unfortunate soldier pre-

sented a twig shorter than the rest. "Wretch!" cries Facundo with a voice of thunder, "thou art the culprit!" and sure enough he was. The credulous gaucho had really believed that his twig would sprout during the night, and in his fear had shortened it.

However the era of these Caudillos (camp leaders) has been brought to a close, principally by the agency of the Railway and Telegraph, and such reigns of terror, impossible in the future, expired in the person of Lopez Jordan, the last of the feudal barons, who, for many years, kept the Mesopotamia (Entre Rios) of the republic in a state of chronic disorder; and yet, although no less than 150 assassinations are laid to his charge, he is still allowed to roam at large, but shorn of all power of doing further mischief.

Again the expertness of the Rastreadores, of this province especially, almost exceeds belief. Apparently without any effort, or close scanning, they will declare from a mere glance at a track, whether the mule that passed by hours ago was loaded or not, whether used for cargo or the saddle, fresh or tired, valuable or worthless, the time elapsed since the footprint was impressed, and numerous other particulars. Indeed as the observation of these men is quickened by being constantly directed to this subject, and they possess wonderful memories, if they once catch sight of a track, they will remember and distinguish it amongst a host of others for years afterwards. One of the fraternity, whose patron, in spite of the most diligent search, had

lost a mule for two years, well knowing the foot-marks of the stray animal, constantly kept a sharp look out for them, and happening to be in Córdoba, a distance of some 300 miles, about two years after it was stolen, was crossing the street one day on the outskirts of the town, and observed the traces of a troop of mules which, as his custom was, he attentively scrutinized, but without appearing to do so by loitering; however something had evidently attracted his attention, for instead of going on his way, he retraced his steps in order to rescue the tell-tale vestigia, and then proceeded direct to the house of his master, the owner of the lost mule. "If you give me permission," said he, "I will restore your lost mule." "Have you seen it?" questioned his employer. "No," replied the Rastroador, "but I have chanced upon proofs to me as infallible." His master laughed incredulously, reminding him that the animal had been lost in Rioja two years ago, and that he must be mistaken; but as the latter insisted, a bargain was at length struck, by which the master agreed to give the man ten dollars in case of success and to mulet him in five, if the mule were not forthcoming: to which the tracker readily consented. Off went the bloodhound, took up the scent, followed it and quickly arrived outside the town at a field where, sure enough, a troop of mules was quietly grazing; but without coming near to inspect them, he went straight to the capataz and said "You have a mule of ours in your troop, of such a colour and height and with our mark; here is the track, follow me

and I will show you the animal;" on they went together, with eyes bent downwards upon the earth, and the track led up to the very beast which proved to be the stolen mule, as the Rastreador had indicated. Notwithstanding the declaration of the capataz that he had bought it, the stray mule reverted to the rightful owner, who was only too glad to reward his faithful servant according to the terms of the contract.

These men will enter a field in the middle of a pitch dark night, and out a troop of loose strange mules, unerringly lasso their own and march them off, distinguishing those that occupy their several places in the team; like the gauchos with their knives, they never make a mistake; and although I have had considerable experience, I never could detect by what sense they were guided.

But not alone skilful in distinguishing the footprints of the lower creation, but even of man, are these Riojano detectives; for at another time a troop of mules with their drivers had arrived at the Recreo station of the Tucuman line, with cargo for the train, and whilst the capataz was quietly sitting beneath a tree by the fireside, sipping maté from an elegant silver cup and bombilla, the rest of the men were all away busy with the mules. Happening to retire some distance, he left the bowl upon the ground, and on his return found that it had been stolen. Not suspecting his own men who were far off, he became convinced that one of the peons belonging to the station was the thief, as the whole of them were employed in the vicinity.

With that he proceeded to find the manager and to declare that one of his men had stoien the maté cup. "How do you know that?" said the station-master. "I will soon prove it, if you bring up your men here in a line," replied the capataz. Brought up they were and the Riojano walked down the file, meanwhile looking attentively at their feet, which were mostly bare, and all at once stopping in front of one unfortunate, remarked in much the same authoritative manner as Facundo Quiroga, "This is the culprit! bring him forward, and I will show you his footprint beside the cup! shoes may be changed, but feet cannot!" The man was of course forced to preceed thither and place his bare foot by the side of the imprint so as to make another, that was found to coincide exactly with that which divulged the secret. To pin and hang the thief up by the arms to the tree was the work of a moment, when he soon confessed his crime and indicated an old algarrobo, in whose hollow trunk he had concealed the coveted treasure. Scotland yard might with advantage secure the services of a corps of Riojano trackers.

The town of Rioja obtains its water from "acequias" or little mountain rills which, trickling down from a noble range of sierras about a league westward and exceeding in height and picturesqueness the inner chain seen from Mendoza, are nevertheless quite insufficient for agricultural purposes, so that to plant now is impossible, although in former times silk, cotton, alfalfa and rice, be-

side an infinity of fruits, were cultivated with great success; the inhabitants therefore have always to import, flour, potatoes and maize from San Juan or Mendoza, and in case of scarcity in those provinces, the Riojanos are immediately reduced to the verge of famine, especially as the lower orders are obliged of necessity to subsist almost entirely upon these comestibles, owing to the scarcity of fresh meat: when I was there, scarcely a pound of maize was to be found in the town. In the matter of food never was there such a simple people, and to provide the little sustenance they require, their whole stock in trade generally consists of but a donkey and a few fowls and turkeys; and when they are just at starvation point, out they sally with long-eared Dun, leagues and leagues to bring in a load of wood, stones or sand required by the upper classes, thus gaining a few reales, sufficient perhaps to maintain them for a month in clover; that month they eat, sleep and smoke away existence, until another pinch drives them to similar exertion. This is the universal experience in the environs of Rioja, nor is it far otherwise within the city where much the same hand-to-mouth course of living is pursued, only the quadruped becomes transmuted into some other equally simple device.

In the middle of April, corresponding to October in England, I found the temperature unbearably oppressive, so much so that it was impossible to go out of doors between ten and three in the day, the thermometer standing at 87° F. in the shade at 2 p.m. Oranges were just coming into

season and grapes to be had in plenty, but with the flavour of the Mendocinas still fresh on the palate, I could scarcely recognize the genus; and as to the far-famed wines, those I tasted, reputed the best, could hardly have been a favourable sample, as they presented a muddy appearance and yielded a flavour such as might easily be compounded with vinegar, water and spirits of wine; the raw material is no doubt there, but the process of manufacture is ill understood.

On the road to Rioja, I got to know there was no such a thing as an hotel there, and consequently felt a little nervous as to the possibility of obtaining accommodation; but this anxiety was soon dispelled, as on alighting, a gentleman presented himself and took me to one of the best houses in the Plaza, where, although merely a common lodging house, I was permitted to occupy a room only by asking it as a great favour, the usual stereotyped formula in these parts. The apartment measured 12 feet by 8; from the roof depended a dirty *cielo raso* (canvas ceiling) with a graceful belly, the walls were adorned with a tapestry of filthy paper in tatters, and as for the floor, the bricks of which it was composed were broken to such an extent and laid so far apart as to threaten dislocation of the ankle at every step. The furniture however was tolerable and I was just beginning to disrobe for the purpose of a thorough cleansing, when it occurred to me there was no water; now in Rioja, the use of that liquid is little understood but for culinary purposes, so that on endeavouring to get my

want supplied I was met by a stare, not so impudent perhaps, but otherwise the very counterpart of that with which a friend of mine from Córdoba was greeted in a London hotel when he inquired for water at dinner. The next article of absolute necessity was a clothes' brush, as I had landed as white as a miller; in reply, the landlady assured me she had had one once, but being such a *cosa rara* (*rara aris*), it had been stolen. The servant however was posted off and returned in great glee bringing a blacking brush, which fortunately had never yet come in contact with the Stygian pitch: on this brush I kept my eye in future.

A few private houses are superior in their domestic economy to the one to which I was introduced, but it is pretty much a Rowland for an Oliver with all of them, although I was assured positively that the town boasts of as many as twenty pianos, yet were they dumb oracles during my sojourn and very likely for the best, as not within the memory of man had a professor visited the place.

The Governor of the province, to whom I had a letter of introduction, received me very graciously and insisted upon my taking potluck with him during my residence in that locality, a favour the more eagerly accepted, as I was aware that the universal dish in those parts was a kind of curry made of whole maize boiled soft, a sprinkling of finely chopped meat and bacon, the whole flavoured to scalding point with ají (*Capsicum microcarpum*), an intensely hot pepper to which Cayenne is

as cold cream: this dish however, which the natives call "Loero," I subsequently became very fond of on my lonely travels northward, simply because I had no choice. Rioja, Catamarca and Tucuman are all curry-mad (cucurri-ed in fact), but in the last mentioned, rice, which grows luxuriantly, takes the place of maize: the chief diet indeed of these upper provinces is vegetable, and although a zapallo roast whole in wood embers is not despicable, especially when hunger presses, an Englishman was never born to exist on such meagre commons. Well then! to invest myself with the character of guest to His Excellency as speedily as possible, about breakfast time I proceeded to the Cabildo, and with no ante-chamber procrastination he at once presented himself, and leaving business, drove me home in his tilbury, where, under the shade of magnificent orange trees loaded with the golden apples of Hera, we breakfasted, a feast fit for Epicurus. Two or three officers of his staff, his father a venerable looking pasha, and a Mendocino, completed the party. The Governor's wife was confined to her room by toothache, a malady universal amongst the ladies of the Argentine Republic, probably owing to the habitual sucking of sweets from the cradle to the grave. In politics a tyrant, His Excellency struck me as a most amiable and polished man in private, and the same may be said of the inhabitants of Rioja generally; he quite sighed when, in describing the straitened condition of his people and the severe economy of necessity practised by all classes, he lamented the

impossibility of arousing in them anything like ambition, and complained bitterly that those who possessed large estancias and who would be reputed wealthy even in Europe, were content to pass their existence in seeming poverty, on lean diet, badly dressed and in dwellings little removed from hovels. When however, he learned my intention of visiting the mining districts, his eyes brightened, for mining to him is an infatuation, in it all his property is embarked, to it his time and thoughts are devoted; and he at once offered me mules for the journey and numerous letters of recommendation along the route. Passing to the library which was hung with maps of the mines as well as geological charts of the region, I was struck with the splendidly rich natural specimens both of gold and silver from the Famatina mines, as well as with the numerous nuggets of gold as large as marbles from the washings in the Famatina valley and the fascinating bars of pure silver, straight from his smelting works in the same district. The object which he is now endeavouring to compass, and of the success of which he is very sanguine, is to establish a French company with a capital of not less than two millions of francs, which by constructing a branch railway to the Tucuman line, erecting the most modern machinery, and confiding all operations to experienced men, would soon enrich the shareholders and benefit the country; nay it is patent to a child that as soon as capital and skill flow into these wonderfully rich regions, very unexpected and most brilliant results must assuredly follow.

Towards evening the governor took me to the churches to inspect some old paintings, copies from Raphael, Michael Angelo, Da Vinci and other masters, which with many curiosities were discovered in the Old Temple of San Domingo, now in ruins, but erected more than 250 years ago by one family, and which was the first Christian church in these parts. It preserves however nothing remarkable except its antiquity and the rough and ready yet enduring materials of which it was built; smooth, water-worn, unhewn boulders set in lime, give an appearance to the walls not unlike that of some of the East Kent churches with their flint nodules.

In Rioja, at times, they have an economical and rather playful way of chiming the church bells for service; as these bells are innocent of clappers, the chorister boys have been occasionally employed to gather a heap of stones beneath and then at appropriate times to fling them upwards to meet at once the difficulty and the bells; and I may here remark that it might be well if all Argentine church bells were in like case; to be deprived of their tongues would be a venial fault indeed, and one to which the general deafened public would be easily reconciled.

The Riojanos have a great horror of bees and allow no hives within leagues of the city; they affirm that they are too industrious and not only gather honey but destroy both fruit and flowers, especially of the grapes and oranges; so a worthy priest of my acquaintance, who maintained a fine apiary on the sly and produced large quantities of

excellent nectar, was at last discovered to be acting contrary to the law, but although the authorities endeavoured to compel him to dissolve his numerous colonies, by firmly resisting an ordinance based on ignorance, he still pursues his favourite and profitable pastime.

Cut off in a great measure from qualified medical assistance, the people are here reduced to resort to local herbal remedies, many of which are very effective: in this district the leaf of the Tala (*Cellis*) is employed in the form of an infusion as a cure for indigestion and also as an antidote to inebriety, for both of which purposes it is invaluable: and if the Riojanos could only manage to discover one more antidote—for the opium of existence in their torpid city, and thus rouse their fellow citizens from a fatal syncope, to take advantage of their excellent soil and climate, wealth and prosperity would flow in upon them. Such a remedial measure was evidently in the Governor's mind when he ordered the attendance, on two evenings a week in the Plaza, of a military band, whose unwonted strains bursting upon my astonished ear sent me at a trot thitherwards, only to find the élite already promenading. Now in all the provinces, there is much more public evidence of caste than in Buenos Aires; nor is this a matter for surprise, since history teaches not only that man, the same under whatever form of government, ever tends to classification, but that the last strongholds of feudalism are always to be sought in rural districts, where the lower orders are generally sunk in igno-

rance and superstition. Here a small privileged circle was railed off in the centre, containing a garden encircled by a broad promenade dotted with reclining seats; into this sanctum were admitted only the cream, and as if to accentuate the difference, armed policemen were stationed at the entrances to drive back the Pariahs.

CHAPTER XXXVI.

TRIP TO RIOJA, CATAMARCA AND TUCUMAN.

CONTENTS :—A start for Chilecito by moonlight—The arriero—Goethe's Bächlein—A huge Æolian—Chairs versus Bullocks' crania—A house not a dwelling—Para V. Don Juan—Noisy chanticleer—Water cress—A Fern used for snuff—A climate so dry that even flowers do not decay—A Scotchman on a single acre—Life amongst the mountaineers—A hardy race of vegetarians—A universal food—Gil Blas's Panegyrist—Gifted Humming birds—A breakfast of herbs—A hard climb to the Casa Piedra—A stone army on the march—An immense hollow boulder caught in its descent—A wonderful natural tunnel—World churning—A tardy appendix—Hungry and thirsty Troglodytes—Mountain verbenas and scented ferns—The guanaco a sign of water—A sight of the Famatina range—A dangerous descent on frozen streams—The dreaded Travesía—Threatened suffocation—A hot roll for the mules—Bachelors' Hall.

Chilecito (little Chili), so called on account of the number of Chilians engaged there in mining operations, but which from the jealousy of everything Chilian, has been rechristened "Villa Argentina," lies 16 leagues from Rioja to the North West, between the sierras of Famatina and Velasco; this was my next destination, and on the arrival of my friend thence with a mule, to fetch me, I proceeded to engage a baggage animal for the journey. The governor, whose mules were absent at the time, kindly ordered the police to supply me with one, and also lent me his own montura (native saddle gear), so off we started at 8 p.m. on a fine moonlight night which although at the latter end of April, was very mild. The mull of a servant man that

my friend had brought with him, and whose sole duty was to take charge of the cargo mule, delayed us very much, by allowing it to stray continually; in fact, in these regions, nothing can be done without a professed *arriero* (muleteer): these men, like the *Vaqueanos* (guides) and *Rastreadores* (trackers), form a race *sui generis*, and are generally much respected for their trustworthiness and intelligence. Their arduous life is one that necessitates great experience, soberness, and endurance and on these qualities the traveller relies, when entrusting life and property, for a time, to these rough sons of the soil. On emerging from the town in single file, the servant bringing up the rear with the cargo, we head westwards for a *quebrada* (ravine), which is visible in the lofty mountains in front, distant about a league; and for a mile or so, the road is lined by a few scattered houses and ranchos which represent the suburbs, succeeded as we near the *quebrada* by hedges of dry prickly shrubs. Gradually the hedges are converted into groves of *Espinillo* (*Acacia cavenia*), *Algarrobo* (*Prosopis alba*) &c., or copses of tangled masses of shrubs in which the *Equisetum giganteum* is remarkable, interspersed at times by the thick round-stemmed giant *Cactus* (*Melocactus*) which falls scarcely short of 30 feet in height. The entrance to the *quebrada* introduces us to rough, broken, stony ground, the debris of the heights, and narrowing as we proceed, the mountains begin to tower threateningly around and above us. Every now and again a stream is crossed, a *Bächlein* which, questioned like Göthe's,

gives the same reply, but whose destination no amount of imagination can render poetical, as it serves but to water the *fincas* (gardens) and throats of the thirsty Riojanos. The road mostly deep sand sprinkled with boulders, now becomes steep and heavy and consequently more difficult, as it winds every few minutes with the ravine through a dense thorny vegetation of *Mimoseæ*, which clings to the water and renders progress almost impossible save at the expense of lacerated skin and torn clothes. The mountains increase apparently in size, but an occasional peep into infinite distance through crevasses, relieves the masses of their sombrous sternness. The telegraph wires, which accompany us all the way to Chilecito, are always in sight, sometimes spanning, at others lining our route and again bounding over the bases of ridges that we are obliged to skirt; the subtle gamut of a huge *Æolian* for ever melodizing the wants of man and inspiring the lonely traveller with a sense of comfort, by fondly diminishing his distance from absent friends.

We had thus proceeded two leagues and a-half, when suddenly the ravine opens out and a rancho greets us. Here lives a family on a small patch of cultivated ground, gaining a scanty subsistence by retailing alfalfa for the mules of passing travellers at the rate of a Bolivian real (about 3*d.*) each the night's feed; so in their midst we determined to pass the night notwithstanding the loud and fierce salutation of a hungry pack of canines which, being called off by their master, shrunk back to the fire

and took no further notice of us; and having unsaddled, unloaded the cargo, tied the mules to a tree, and sent off our man to cut fodder, we drew near a blazing faggot fire burning in the open air, around which the host placed chairs, strong serviceable home-made frames with hide seats, an unwonted luxury completely putting to shame the bullock's cranium that does similar duty in the camps of Buenos Ayres. As these hardy Riojanos sleep in the open air winter and summer, merely covered by the cloths of the montura, the rancho was of a very primitive type, a day-type in fact which, by an inversion of idea involving no conception of dwelling, home or protection, as in civilized parts, served merely to ward off the fierce rays of the summer sun, so much more objectionable to such people than the severest cold or rain of the bleakest night. The roof, supported by four posts and made of brushwood bound together and covered with earth, three sides of the same material but admitting light and air freely, and the fourth completely open, formed a shed which, on a tempestuous night, would afford but little protection to a delicate traveller; the only other construction in this mountain settlement was a corral (cattle pen) enclosed by the strong trunks of trees.

After a frugal supper and devoting the fragments to Don Juan* we prepared to turn in, and as I had brought a folding Crimean catre with me, a

* In Rioja it is a universal custom to style the fox Don Juan, and when people throw away a bone or any edible refuse, they invariably say, "Para Vd., Don Juan!" (For you, friend Jack!) and in like manner with other wild animals.

few minutes sufficed to put it up under cover of the roof, and heap it with ponchos and montura cloths, and then snugly ensconced under a pile of bedding, one of the wayfarers was soon fast asleep. However as,

“ Within this homestead lived, without a peer
For crowing loud, the noble chanticleer.”

a fact painfully revealed in the small hours of the succeeding morn, and further sleep being impossible with our noisy neighbour flapping his wings almost in our faces, we were soon crouching round the Vestal fire again, as the air was extremely raw. Then packing up our beds, saddling and loading, and paying our own and our animals' hotel bill, we bade the ragged family good-bye and started once more on the toilsome ascent, still up the quebrada, which, marked out by league and half-league posts, whose distances seemed less and less uniform by reason of the increasing difficulties of the way, taxed our energies to the utmost. We now part company with the stream on which Rioja depends, but cross many others, in most cases laden with watercress, the *Mimulus luteus* and the *M. parviflorus*: in fact the vegetation is very fine along these quebradas; the trees are covered with *epiphytic orchidaceous* air plants in magnificent flower, and every rock crevice exposes to view various species of *Filices* eagerly pushing forth their fronds to attract the traveller's admiration, amongst which the *Notholaena nivea* which when dried is called by the natives Topaz-aires and used by them as snuff: the rocks too, not to be outdone in this race for

beauty, adorn themselves with robes of the ashen-grey and yellow-green mosses and lichens. About ten different species of aves inhabit this wild gorge, including two or three brilliant Humming-birds which, in vast numbers, chirping loudly and darting in every direction with the speed of light, bury their long slender beaks to the hilt in the flaming racemes of the ephiphytes, in the shorter cups of the Bastard Jasmine (*Cestrum pseudogina*), here called the Idiondilla, or in the purple bells of the *Lyceum cestroides* which, rare in Buenos Ayres, grows in this district wild and in profusion to supply the nectar-loving *Trochilidae* with their daily ambrosia. Nor are the trees alone gaily decked with the borrowed plumes of their parasites, but the ground beneath presents one mass of brilliant scarlet, for so dry is the climate that the flowers strewn at their base do not decay and lose colour, but simply shrivel. Every now and again, as it was below, the mountain heights seem to come to a parley and lower their heads so as to form sloping crevasses, which permit momentary glimpses of far-distant, highly picturesque and towering peaks.

At about four leagues from Rioja, when the sun was gaining power, we stopped at another rancho, the last before reaching Chilecito, in order to partake of goats' milk, and await the arrival of the dilatory boy with the cargo mule. This spot is called the "Punto del agua" from its superior water; and with a square (five acres) of land under cultivation the people manage to keep body and soul together. I remember a Scotchman declaring

that a man could live on the produce of a single acre of ground; he tried the experiment on the outskirts of Dover some years ago, and to my knowledge maintained himself there some time, but the sequel is unknown to me; however he had not the advantages of this family, for besides the yield of the land, a flock of goats, two or three sheep, and a donkey or two, here formed quite a respectable farmyard.

In this eyry we found the usual family party consisting mainly of dusky breechless urchins, clothed in a single ragged shirt of many colours; but as promotion takes place at the early age of six or seven years, they look forward to becoming then the owners of a pair of razeed baggy unmentionables, sadly in want of repair which, with a battered felt hat that was once white, and as a mark of special favour, a pair of sandals formed of a single piece of hide strapped under the foot, complete the costume of these young and hardy mountaineers. Of the nineteen species of gourds (*Cucurbita*), which are called Zapallos in the Argentine Republic, many are grown at the Punto del Agua, and of astonishing size, so that as the residents are vegetarians, these with the wild Algarrobo render them independent in the matter of food, and altogether the halo surrounding this rancho was of a brighter hue than that of its fellow below. This Algarrobo or Carob (*Prosopis dulcis*), whose pulpy pods, resembling externally the French bean, form an article of supreme importance in the interior dry provinces,

as food for men, horses, mules, dogs and poultry, in fact for almost every living creature, grows wild and in wondrous profusion throughout the country, needing only to be gathered when ripe and kept dry to yield a fattening manna to these Western Israelites. When ground into meal and baked in the form of cakes, it is called "Patay," when partly distilled it yields a pleasant and stimulating beverage called "Aloja," and when the pod is simply chewed, it furnishes strength and endurance on a journey, in this resembling the "Coca" plant (*Erythroxylon peruvianum*), the tree of Hunger and Thirst; and lastly it relieves the "Puna" or distress of the lungs, consequent upon high altitudes. Well! we bought an almuda (15 lbs.) of this precious St. John's bread for a real and a half Bolivian (about 6*d.*) and gave it to the mules, who immediately set to work upon it like Gil Blas's panegyrist, the dogs and fowls crowding around for the stray pods. My attention however was quickly withdrawn from the quadrupeds and riveted on the Picaflores (Humming-birds), numbers of which were darting around, one gifted with song, and others with a distinct whistle; being well acquainted with the shrill chirp of the family, I thought I must be the victim of my imagination, but successive repetition made me no longer doubt.

At length the tardy appendix appeared with the cargo mule and away we went once more, with much the same experience until our arrival at the five-league post, at which point the ascent of the *cuesta* (summit) commences, and where we pro-

ceeded to choose a spot for the matutinal meal. Nor had we long to search for a suitable site; a grove of noble trees affords shade, a boulder a table, and by its side a bubbling sparkling rivulet yields not alone the wherewithal to slake thirst, but on its bosom bears the finest watercress, bunches of which we gather by merely stretching forth our hands. On rising from breakfast and casting our eyes upwards from the bottom of the quebrada, we soon become aware that our difficulties are only just commencing. The narrow path in front, creeping up the mountain side, presents to view something like a stone staircase, and is so steep and rough as scarcely to permit the rider to retain his seat: this continues for more than a league, and then we bid adieu to trees and shrubs, although the humbler flowering herbs with their rich and various hues, especially the exquisitely scented purple corolla of the verbena, the coarse grasses and the lovely ferns, still cling to us. New views continually and unexpectedly open out and surprise by their vast panorama, as the animals pause every few yards for breath; and after an hour's excessive labour from the foot of the cuesta, we reach a ledge or small inclined resting place, whereon is deposited the casa piedra (rocky house), which is a real curiosity. Looking down directly below, the bottom of a deep gully is discerned and on the opposite side rises another mountain, whose face is thickly spotted, from the bottom of the gully to the very peak, with large massive schistose boulders, all more or less cubical but with smooth

water-worn surfaces, their glistening masses hanging somewhat loosely and evidently all on their way to the valley beneath; all arrested to the number of some thousands, waiting for the summons, from earth or heaven, to move on. My eye was fascinated by these disrupt groups, their purpose so evident that I could fancy I perceived them in motion, a stone army on the march. And as if to accentuate the motion and make patent to the eye, what before was only a mental deduction, casting our vision down the gully to the left, from our position on the rocky eminence, there we espy a gigantic precipitous block, which had acted as a buffer to the lesser descending erratics which, by the force of the concussion, had been tilted and piled one on the other in most fantastic huddled groupings, forming extensive and labyrinthine caverns beneath, scudding in and out of which I observed numbers of those beautiful and long-tailed Mountain Biscachas (a species of *Lagidium*). To match the sportive boulders opposite, the mountain on which we stood had likewise its errant blocks, but not to so great an extent, nor were they in quite such a hurry to reach their goal. The "casa piedra" itself is one, evidently caught in its descent by the ledge which affords us a resting place, and curiously enough toppled over so as just to alight with its interior hollowed surface undermost, forming a cavern capable of holding twelve persons. That its interior surface was at one period uppermost and excavated by the action of water is pretty clear, as it is slightly irregular although perfectly smooth and devoid of tool

marks; moreover it is just resting independently upon the mountain side, having in three or four places besides the entrance, half a foot of space between it and the ground. Looking about for further evidence, many similar boulders lie around, all in the same manner more or less excavated by water; but about five hundred yards higher up, an example of still greater interest presents itself. There stands an indubitable record of arrested motion, the Sajuan or passage, which consists of an enormous rock mass that in its downward headlong course, turning a somersault, threw its concavity beneath so exactly as to form a passage five yards long and sufficiently broad and high to admit three men on horseback abreast, right through its heart. What a thud must that have been! what heat generated! Our road on the morrow lay through this tunnel, and now standing there amidst exquisite and varying landscape speaking of ceaseless vitality on the one hand and as equally ceaseless decay on the other, we found ourselves in the very presence of world-churning, the formation of the soil of the plains was going on before our very eyes; looking mentally through the wrong end of the telescope of Father Time, and concentrating a geological period into a few hours, there we beheld visibly revealed the various changes of the upheaval of mountain masses, their gradual decay from birth by atmospheric and terrestrial influences, their disruption, descent and pounding by trituration, their subsequent churning by wind, water, gravitation, frost and snow, and all to clothe the valleys with a

life-giving soil. Communistic Nature not only abhors a vacuum, but seemingly seeks a dead level, for ceaselessly from their rise does she strive with all the means at her command, by reducing the towering rocks and elevating the plains, to smoothe the inequalities of her domain.

Some little time before we reached the "Casa piedra," we had completely lost sight of our man with the cargo mule, but imagining he was resting a while from the fatigue of the ascent, unsaddled our mules at the cavern and let them loose on the mountain side to seek what little grass they could find amongst the rocks. Unfortunately the principal part of our pabulum was below in the saddle bags of our dilatory attendant, but we had brought with us a little corned beef and bread, besides a bottle of water, whereon we proceeded to lunch. Our frugal meal ended, a ramble succeeded and by threading in and out of the army of boulders, I succeeded in collecting about ten different species of ferns; but although in general the indigenous vegetation is so different from that of Europe, the Filices form an exception.

As it was now approaching sunset, we began to be anxious about our servant and scaled a giddy promontory, which commanded a fine view of the road beneath for upwards of a league, but nothing living was visible; just at sundown however, by the aid of a telescope, we made out a horseman ascending, with an extra mule in front, so we awaited in patience his advent; in the meanwhile collecting fuel from the dry stems and roots of the various

herbs, we soon had a glowing beacon, for when the sun in his daily descent begins to be shrouded by the hills, the atmosphere at these altitudes suddenly becomes very chill. Then the creeping darkness warned us it was time to seek our stray mules, but as they had wandered far, this was no easy matter on foot; the moon however burst forth and lent the assistance of her rays so that my friend succeeded in catching his, but mine was nowhere to be found. The welcome sound of horses' hoofs now announced the coming man, who turned out to be the postman going in the same direction as ourselves, with a spare mule carrying the letter bags, and from him we learned that as soon as our backs were turned, our man had unloaded and left the cargo on the road, with all my valuable instruments and clothes, taking the animal back down to the Sauces (willows) on the pretence that it was tired. Such is the kind of service the traveller must expect in this country, unless he personally superintends every arrangement. This conduct cost us an extra day on the road, and much suffering from hunger and thirst. The postman rendered great service by catching the other mule, and then rode on. We were now not only short of food but water, so my companion saddled up and trotted off a mile or two to fill our solitary bottle and during his absence, I amused myself in this solitary spot by piling high the fire. On his return some shreds of corned beef and a drink of water sufficed for dinner, and immediately afterwards we retired to the cave to pass the night, the saddle-cloths

our bed, and the pommel or a stone our pillow. Next morning the troglodytes prevented the sun, as Sir Philip Sydney recommends in his Arcadia, and after making up a blazing fire and consuming the remains of that thirst-inspiring beef, washing it down with pure mountain dew, made preparations for the renewal of the journey, determined not to await the arrival of the *anguis fragilis* (slowworm). Passing through the natural arch before referred to and continuing to ascend, we at length reached the summit of the *cuesta*, our path strewn the whole way with white, purple and scarlet *verbena*, whilst at one spot the air was loaded with the aroma from a bed of scented ferns. Here we started a *guanaco*, an infallible sign of the presence of water, and sure enough soon after desery a hollow containing the precious liquid, a discovery no less delightful to the mules than to their riders, so letting the poor beasts have their fill, we push on, shortly overtaking some people whom, after salutation, we pass as their pace did not suit our empty stomachs. From the summit, at a height of 8,000 feet, besides mountain chains on all sides, the *Famatina* range stands out boldly to view with its *Cerro Nevado*, whose glittering peak points upward at an elevation of 22,000 feet. The descent is more dangerous, if not more difficult, than the ascent, consequent on the multitude of streamlets which, bursting from the mountain side, become frozen and render travelling almost impossible. Down however we glide and scramble in safety, by following a gully to the bottom and then entering upon a

quebrada with much the same scenery and vegetation as in the ascent on the other side, only reversed as a Sotadic distich, but with this difference that each successive ridge is crowned with an army of gigantic cacti, grenadiers from five to fifty feet high and three feet in diameter, whose stems when stripped of their pulpy envelope make excellent, tough and light wooden flooring; and about ten a.m., after having crossed nine leagues of mountains, arrive at their base and the mouth of the ravine, from which we get a full view of the valley and opposite heights, both of which have to be crossed before reaching Chilecito, distant six leagues. This valley forms one of the dreaded "travesias" or sand deserts which, dotted here and there with the inflexible branches of the spiny nopal, burning, shadeless, waterless and intensely dusty, strike terror into the hearts of travellers; the path lies distinctly visible as a glistering arrow-like thread traced in the arenaceous salitrous soil, and the only sign of civilization is the telegraph posts that line the road. A blazing sun beats down upon us as we start to cross this "Saharita," and having but two-thirds of a bottle of water between us, we agree to dole it out at the rate of a mouthful apiece at each league post; in fact, without continual drinking, the walls of the throat become so glued together that suffocation would soon ensue. The heat and fine dust are something terrible, I shall never forget it; notwithstanding, we kept the poor mules at a gallop for a league and a half and then unsaddled and let them have a ten-minutes' roll in

the deep dust, which freshens them more than the stereotyped English hay and water; during which interval their semi-animate speechless riders lay panting on the ground. Up come the willing mules smiling and after wasting no time in saddling and then inspecting the barometic water flask, we stick to it again and at last have the satisfaction of at least catching a glimpse of our goal, but still a great way off as the leagues are very long: but the sight nerves us to fresh exertions and spurring the animals to the utmost, pull up at last half dead at the hospitable Bachelors' Hall, whose doors stand open wide to welcome us. To throw ourselves from the saddle and on to the grapes, which were hanging in luscious profusion around, was the work of an instant; a delicious cool bath then succeeded, but it was not until after dinner that complete equanimity was restored to our exhausted frames.

CHAPTER XXXVII.

TRIP TO RIOJA, CATAMARCA AND TUCUMAN.

CONTENTS:—Description of Chilecito—Every shopkeeper the owner of one or more mines—Bachelors' Hall family—Value of barrels—Great English interests unprotected—A novel use for the cartoons of the Illustrated London News—Stalwart English and French Vulcans—Richness of Famatina—The relative position of metals that of their specific gravities—The loftiest live on the Earth's surface—Puna—Rearers—Indian stone town remains—Toasted cream cheese—Lonely miners' huts—The Hidalgos had wonderful noses for the precious metals—An adventurous climb—Yield of the precious metals—Mountain Doves.

The town of Chilecito with its gardens and vineyards lies in the form of a horseshoe, surrounding and intersecting a low range of hills, at an elevation of 4,000 feet above sea level, and on account of its situation in the very heart of an immense mining district, rich in gold and silver, exceeds in importance the capital Rioja. It is well-watered and although poorly provided with cattle and not at all with sheep, abounds in vegetable produce, fruits and wine. Among its 1,500 inhabitants are a great proportion of Chilians, a number of whom understand English more or less, besides a colony of seventeen Britons and Americans. Its principal streets, which are cut up into the usual squares, contain many shops and it is a remarkable and unique fact that every tradesman is the owner of

one or more mines, but lacks the capital necessary to work them. But then to own a mine is of all things the most simple; the requisite formalities consist in merely prospecting and denouncing, or if an old mine be known to be deserted, then simple denunciation is sufficient to give a claim, which is allowed on the payment of a trifling patente (license) to the Government; but to maintain a valid claim, some one must be left in charge, or the mine be actually worked at least two or three days a year. But the very facility with which ownership is established breeds a system of continual litigation, for when once a man begins really to work a mine profitably, a host of claimants start up to assert their rights to previous ownership; my friend, an old Cornish miner, had thus a lawsuit involving many thousands of pounds which lasted for years, and greatly frustrated his energies during that period.

This district is without doubt the richest in silver yet discovered in the Republic, and only needs capital and skill to render it probably unequalled in the world. Innumerable lodes in the schist yield every form in which that precious metal occurs; fine specimens of native, ruby and horn silver continually occur; and in addition, the rotten quartz, so easily worked, is the teeming matrix of gold.

The family at Bachelors' Hall consists at present of five Englishmen, two miners and their three friends, living together in a somewhat frugal but happy way in a house situated on the northern

prong of the horseshoe. In their leisure time, you find them each taking a share in some domestic employment conducive to the general welfare; such as wine-making, poultry-rearing, gardening, &c. and in the absence of suitable decorative paper, they have succeeded in covering the walls of their rooms with copies of the Illustrated London News. My friend the senior Bachelor made a considerable quantity of wine last season, but having no barrels, entered into an arrangement with a man in Rioja to send him twenty or thirty, on the condition of keeping half and returning the other half full of grape juice as a *quid pro quo*; an agreement which shows clearly the value of hogsheads in Chilecito.

In this neighbourhood great English interests are at stake, so much so that the British residents have offered to support a Vice-consul for their protection, but the proposal has hitherto been treated with neglect: Englishmen settled in South America however are well versed in the virtue of meek resignation to the coldness with which their claims are listened to by the authorities at home, and frequently indulge in reflections which show that they consider themselves less fortunately situated in this respect than any other foreign community. Passing southward round the curve of the horseshoe, we came upon the extensive smelting establishment of Messrs. Almonacid and Parchappe, fitted up with such splendid machinery as is only found in two other places in the world, in Marseilles and California. It positively makes one's mouth water to behold those huge bars of

pure silver! but lest strangers should be tempted to sink the *tuum* in the *meum*, close at hand stand bright rows of arms of precision and stalwart English and French Vulcans trained to use them.

Six leagues from Chilecito, in the Famatina range, lies a tract of about 200 square miles, containing hundreds of mines yielding gold, silver, copper, tin and bismuth; and it is a curious fact that those of gold are always found beneath and the copper at the top; in fact, the relative positions of the metals seem in proportion to their specific gravities. Mexicana, the peak of the chain, rises to the height of 24,000 feet, and mining operations are prosecuted at the astonishing altitude of 19,000 feet, the loftiest hive on the earth's surface, in which busy man is employed in daily labour. Here the air is so rare, that the very mules frequently drop dead from the puna, and the slightest exertion on the visitor's part is accompanied by violent pulmonary disturbance; the pulse throbs as though it would burst its elastic walls, the capillary blood vessels are ruptured and utter prostration succeeds; and yet, it is simply incredible to behold the miners emerging from the deep shafts, bending under burdens of 150 lbs weight of ore, but all the while roaring like a brokenwinded horse. Poised as it were between heaven and earth, far above the clouds, mantled by an intensely blue canopy, a misty sea beneath, around the glistening whiteness of eternal snow, frozen beef his food, frozen water his drink, with a temperature constantly below freezing point, the hardy miner pursues his despe-

rately lonely toil: silence here speaks but in the most forlorn of tones. My friend's mines were situated at elevations of 8,000 and 14,000 feet respectively, the former of which rich in gold, I visited on mule-back. About a league from Chilecito we pass the remains of an Indian town, in stone, and at least three-quarters of a mile in extent: these old Indian relics are always in stone; this was the former town of Chilecito and in these mountain districts, sites have frequently to be abandoned and new ones sought, owing to some change in the direction of the mountain torrents which, in the early part of the year, descend with irresistible force, inundating and devastating whole villages. At the height of 4,000 feet are many species of Ferns, of which I collected ten from the saddle: three or four solitary houses are met with on the road, at one of which we breakfasted and where the chief dish was toasted cream cheese, a very great delicacy, and as we took wine with us, we did not fare badly. Altogether the journey of six leagues occupied six hours and was laborious, not only from the difficulties of the ascent, but from the number of impetuous streams, one of which we crossed actually 140 times, saturating our feet and legs and necessitating a change of clothing. On the road we passed troops of mules laden with beef and other requisites for the mines, and arriving at a gorge in the mountain side, into which the sun never even peeps, and taking a sudden turn, we emerge in front of a row of miners' huts, all deserted but one, in which a solitary boy with

three dogs keeps his weary watch over my friend's property at an elevation of 8,500 feet, and in front of the huts, a cold mountain rill adds an extra shiver to the general bleakness.

We enter one of the dwellings, a dark hole built of stone cemented with mud, the door made of the refuse of packing cases, a window blocked up, an Illustrated London News plate here and there adorning the oozy walls, the floor of mud, two bedsteads of hide stretched over wooden frames, three low wooden seats and a rough table; such was our home for two nights. Another forms a storeroom, wherein lamps, fuses, hammer heads, oil, &c. are kept; a third, the boy's cabin, to enter which a blazing fire in the middle of the floor tempts us, but notwithstanding a hole in the roof to let the smoke escape, so dense was the cloud as effectually to drive us back from the coveted warmth. Close adjoining stands the rough crushing machine, with washing plates attached, worked by water power. Hunger made us as prying as rats; every hole and corner was searched for food and table requisites; luckily some spoons, knives and forks, pewter plates, an old iron-pot, a lamp and oil turned up, but the only thing edible that we could discover was some charqui (dried salt beef); so kindling a fire, our pot of charqui was soon simmering and for once we had the pleasure of revelling in slaves' food; but so icily did the wintry blast blow through the crevices that we were glad to exchange the pleasures of the table for those of the couch and piling on rugs and saddle gear spent

a very bitter but not altogether sleepless night. Rising before the sun, we proceeded next morning to inspect one of the mines, an opening into which was visible some 500 feet up the mountain side; but to reach this was no easy task, even with the aid of the miners' sturdy walking sticks, as the puna is so severe and necessitates frequent stoppages to gain breath. On arriving at the spot, the face of the mountain is seen to be honeycombed in every direction; some of these shafts were the remains of early Spanish attempts and always indicate valuable lodes, as the old *Hidalgos* had wonderful noses for the precious metals. Provided with a swinging lamp fixed at the end of a pole, we enter one and passing for a few yards along a level, suddenly a halt is called, as a narrow ledge over a deep chasm presents itself, which can only be traversed by holding up both arms and feeling the perpendicular face of the rock; then as the miners always work by following the richest tracings of the lode, the way becomes most tortuous and can only at last be followed by climbing a pole set at an angle of 45° , with simple alternate notches in its sides and overhanging a yawning abyss; this the workmen dignify by the name of a ladder and persistently refuse to make use of any other form, and however easy it may be for a half Indian, whose naked toes form a sixth sense, it is by no means a dignified nor safe method of ascent for a Christian. To reverse the old quotation, *facilis ascensus,—sed revocare gradum*, to come down again along those bending slender poles, required a strength of deter-

mination that almost proved a failure in my case, and yet the Indians are in the constant habit of doing so with heavy loads on their backs; they have now however so arranged matters, that from the different levels the ore can be shot down the sides of the mountain into the ravine beneath, by which means labour will greatly be economized. Even to the unprofessional eye the richness of the veins of silver especially is evident, and I brought down with me wonderfully productive specimens of gold, silver and copper ore, whose yield is, for gold (from rotten quartz) .007 per cent., for silver (as silver glance) .06 per cent. and for copper (as pyrites) 30 per cent.; but all these metals are likewise occasionally found in the pure arborescent form. What with the want of roads, the distances to be traversed, and the consequent expense of transport, capital has not yet been invested to any great extent in these mines, so that the methods pursued are most primitive and wasteful, and it is usual to work them on shares, giving the men a percentage on the proceeds of the ore extracted.

One would imagine that these solitary, giddy realms of Plutus, would possess no charm for any other living creature save man, whose lust is gold; not so however, for amongst these mines I was surprised to see abundance of mountain doves in pairs, of the exact colour of the rocks, and which made a very peculiar hissing sound with their wings: besides these, I noticed many very rich and rare Humming-birds; but unfortunately had no fowling-piece with me.

CHAPTER XXXVIII.

TRIP TO RIOJA, CATAMARCA AND TUCUMAN.

CONTENTS:—Epidemic of Quinsy—Travelling on mule-back asleep—The stiffest buckram known—The mule load of 300 lbs.—Dust Ho! The cost of civil war—The tracks of animals—Streams give life—A postman's experience—Nothing like the ground for a night in the open air—A flash of Sparganura Sappho—A region of Jume—A bird's eye view of Catamarca.

I had intended to make a long stay at Chilecito and thoroughly investigate the whole of its rich mining district, but on my arrival, finding a severe epidemic of quinsy raging throughout that mountain region, in fact a serious case at Bachelors' Hall itself, my departure was thereby hastened and I at once began to look about for immediate means of travel. A muleteer, leaving in the course of ten days, offered his services to take me through Catamarca en route to Tucuman, a journey of upwards of 100 leagues and occupying fifteen days, but not feeling inclined to wait so long, I engaged a guide and with three mules we started at 3 p.m. the following day, on the return trip to Rioja. It took us until 10 p.m. to cross the frightful travesia, the greater part of which journey was performed whilst fast asleep on mule back. Encamping in a ravine, we lit a fire and had some refreshment and then indulged in more sleep, until the rise of the

moon at 1 a.m. aroused me and awaking the guide, he proceeded in search of the mules which had been turned loose, and in ten minutes returned with them. To me it is always incomprehensible how these men succeed in finding their animals so quickly, straying as here in an unknown, dark and rocky spot; their quickened senses appear at times miraculous. Saddling up we wended our weary way, and with the exception of one hour for breakfast and another for dinner, spent the whole of that day and of the next night, that is twenty-four hours, in the saddle, arriving in Rioja before sunrise; the only regret I felt during the mountainous part of this tedious journey, was the impossibility of passing it, as well as that over the travesia, in slumber. Dismounting and entering unbidden into an empty Barraca (storehouse), we there awaited the revival of the city from its nightly repose.

The lady with whom I lodged was well known and had a large circle of visiting acquaintance, who used to drop in of an evening until the house was overflowing. The company in its elementary state sat on chairs arranged in the form of a circle in the sala (parlour); then as it grew in dimensions too numerous for the sala, an adjournment was made to the patio (courtyard); when too many for the patio, a move took place to the street pavement; and the cry still being "They come," the circumference increased till it comprehended the road way, the limit to the hospitality of any single house; and there they would sit for hours, with scarce a word spoken, staring at one another;

talk of English formality! the buckram of Rioja society is about the stiffest known: my thoughts were principally devoted to a speculation as to where all the chairs came from.

I was very soon tired of this my second visit to Rioja, and determined therefore to proceed forward at once to Tucuman, viâ Recreo; but finding that the Diligence had already booked eight passengers, of whom two were ladies, and knowing by experience the great discomfort of a crowded vehicle on so long a journey, forbore to take my place, preferring to wait a week for the succeeding one; when, in popped my friend Don A. Gallindez, Chief of Police, and hearing my disappointment, invited me to accompany him on horseback to Catamarca, a ride of 30 leagues, to which I gladly assented. To look up a cargo mule and saddle horse was the next business and then the following morning at 8 a.m. accompanied by a manservant, we started and accomplished the distance in four days. Señor Gallindez rode a mule, I a horse, a cargo mule carrying the heavy luggage with ease, as the weight was under 300 lbs. A cloudy day greeted us, but as it so seldom rains in Rioja, I was under no apprehension but rather pleased that the scorching though mid-winter rays of the sun were thus diluted and the dust rendered somewhat quiescent, yet still almost sufficient to suffocate a European. The fine dust from the Kentish chalk roads is bad enough, but no Englishman can form any idea of the annoyance and even danger from this source in the Upper Provinces of this republic.

In a short time we emerge from the town, passing the site of a battle which took place during the revolution of 1867, where a cross and a heap of stones mark the resting place of the hundreds that slept on that occasion, and I could not help remarking to myself, if the civil wars in England cost 100,000 lives, the Argentine Republic, with justice, might lay claim to even a greater holocaust on the altar of her liberties. The road runs straight as an arrow for leagues and I amused myself, as we trotted along in the early morning, by deciphering the various tracks of animals, left in its sandy bed, during their night wanderings; they were very distinct, especially of snakes, cariamas, pumas and foxes. The telegraph posts and wires line our path and the subtle fluid for ever murmuring its unresponsive music, flashes by on lightning wings, speaking of welfare or mischief to thousands. Low, sickly, thorned and gnarled brushwood is all that greets our eye to tell of terrestrial life; but close on our left, the whole way to Catamarca, are we watched by those grim sentinels of time, the Sier-ras, which ever pointing upward, direct man's thoughts where are no deserts but verdure sempiternal.

The distance from Rioja to Catamarca is about 100 miles, and I was astonished to see the spaces marked in miles, and not in leagues or kilometres as is usual in all other parts of the republic. The ride on the first day was slow, monotonous and very uninteresting, as were continually obliged to slacken our pace to allow the cargo mule to overtake us,

and the landscape was without life: eight weary leagues were traversed without sighting the vestige of a human dwelling, and then, when one of more than ordinary pretensions loomed, it was welcomed as the sure indication of running water; as streams alone, in this country, give birth to inhabitants, pasture, flocks, herds and wealth; yet in some districts you may travel 50 or 60 leagues without meeting with one. We were doomed to disappointment however in this instance, as in place of the babbling brook, the child of our imaginations, we stood viewing our own images in the foul waters of the nasty represa, and what was worse, had to purchase of the turbid liquid to assuage the thirst of ourselves and animals. As it was now late in the afternoon, we looked about for even a shred of pasture, but in vain, the most abstemious of goats would have shaken its head here; so proceeding onwards another league, with two or three bottles of the diluted mud in the saddle bags, happened, just about sundown, upon a little scrubby grass, and here, nine leagues from Rioja, encamped for the night. We chose an open spot in the woods, unsaddled, hopped and let loose the animals to seek their own food, and then as there was abundance of dry fuel, soon had a good fire blazing, over the embers of which an asado was cooked that, aided by wine and other necessities from our travelling larder, enabled us to satisfy the claims of hunger and thirst; when, in the middle of our repast, up galloped the postman, who had left Rioja two hours after us, and very glad he was to accept our invita-

tion. This letter carrier, a lad of sixteen only, seemed to make light of what we considered a very hard life; perhaps he had been familiar with one still more arduous—and all judgments are but comparisons. Leaving Rioja at 10 a.m. he had to be in Catamarca 100 miles off at 4 p.m. the day following, that is in 30 hours, irrespective of weather, which necessitated riding by night as well as day. Only one spare mule was allowed for each journey, and four round trips had to be made monthly for a remuneration of ten Bolivianos (26s.), besides food on the road. Many of these hard riders would astonish English jockeys in feats of endurance. And now our anxieties ran on the sleeping accommodation: although a catre was amongst my luggage, I discarded it in favour of the ground which, for a night in the open air, is much superior to any bedstead whatever; the latter is always cold, as the bedding persists in coming off and you are sure to wake up to find some member or other either rheumatic or paralytic. So spreading a waterproof sheet over a bush to keep off the dew, and dragging the trunks into a quadrangular form beneath, the saddle gear was thrown into the intermediate space, the gun case covered by a feather pillow put at the head and a rug and a poncho for covering, and into the bed which was now ready I crept, to enjoy one of the soundest sleeps I ever remember.

At sunrise we needed no summons, and sending the peon for the animals, in half an hour were ready to resume the road to the village of Chunchicha, distant eight leagues and which, being the

first spot where water was to be had, of course determined the stage. After watering the animals amidst Algarrobos of very fine growth, and filling our own "Chifles,"* we push on four and a half leagues further to Capillan, another large straggling village abounding in lanes and coarse vegetation, where we put up for the night at a friend's of Mr. Gallindez. As I was here riding along pondering, something very brilliant flashed before my eyes, and on looking up was astonished to behold those resplendent Fire-tailed Humming-birds (*Sparganura sappho*) darting across our path like Martens, and so tame that many of them scarcely eluded my grasp from the saddle; this district seems to be the southernmost limit of these lustrous birdlings in their annual austral migration from Bolivia in quest of their favourite food (*Nicotiana glauca*) as it flowers.

Loaded as we were with the fragile contents of our saddle bags, restricted in pace by the cargo mule and the heavy nature of the deep sandy soil, we considered the $12\frac{1}{2}$ leagues accomplished this day highly satisfactory; a distance of $8\frac{1}{2}$ leagues now remained to bring us to our goal, and this we set about accomplishing the next morning at eight o'clock. Our road lay through a region of Jume, a soda plant peculiar to the Argentine saline deserts, leading to the long rambling villages of Villa Prima, in which notwithstanding the abundance of

* A pair of cows' horns with wooden bottoms and stoppers strung together by their necks with a piece of hide and slung over the back of the saddle.

water power I could discern no mill, and Mirafior, the latter of which, extending quite two leagues, boasts of a Plaza, church and some good houses. Just before entering Catamarca, we ascend a rising ground, from the top of which the city lies spread out before and somewhat beneath us, the towers and dome of the Cathedral forming a very conspicuous foreground to the picture. Picture it is, for on the left about a league off, runs a high range of mountains, and on the right at an equal distance another similar chain, whilst in front, that is on the other side of the city, are dotted several lesser ranges and detached hills, so that Catamarca lies surrounded on three sides by mountains and forms, in the centre of the enclosure, a vivid green oasis very pleasant to an eye so long accustomed to dwell upon arenaceous wastes.

CHAPTER XXXIX.

TRIP TO RIOJA, CATAMARCA AND TUCUMAN.

CONTENTS:—Description of the city of Catamarca—A noble cathedral—Operatic music on a cathedral organ—The fair Catamarqueñas on the way to church—Devoted pilgrims—The shrine of the Virgen del Valle—Drunkenness universal—Classic nomenclature—Sexual names confounded—A gauntlet of compliments and its sequel—Verbosity of beggars—Chuchu in a desiccated climate—The Grand National festival on the 25th of May—The Tedium—A magnificent ball and its consequences—Pretty girls the victims of political strife.

The city of Catamarca, lying at the foot of the Sierra Ambato, is well watered by the river Tala, which sheds its precious gifts through every house. Built on an incline of 1 in 75, descending from west to east, which contributes much to its purification, it is in all respects incomparably in advance of Rioja; larger and yet more compact, cleaner and prettier, better built and paved; a city in fact full of life, business, pleasure and even gaiety. The principal Plaza, which with its fine trees and lovely promenades adorns the centre of the town, is such as to entice to a stroll within its precincts, especially when the really excellent police band discourses the latest European airs; and the western one on the outskirts of the town in imitation of

that in Córdoba, contains a large central reservoir for irrigation. Lately however, they have commenced a new system of waterworks including the old reservoir, underground canals and filters with a large central fountain in the plaza, but in order to avoid the expense of iron piping are making use of bricks and lime which, in my opinion, will prove a failure. To minister to the physical and intellectual wants of the inhabitants there are, two hotels, a club-house whose extensive suite includes billiard and ball, library and reading rooms, and to which the president was kind enough to send me a free admittance ticket; a girls' Normal school, under the charge of three American ladies, the apparatus and furniture of which down to the very door hinges were brought from the States, and whose pupils to the number of 200 receive a superior training; a boys' Normal school, a National College with 14 professors and upwards of 200 pupils, in whose halls I was gratified to find a splendid collection of instruments in the domain of physics, a small museum of Natural History, whose specimens, as they had fallen into neglect during the absence of the professor, the rector put under my care to arrange and classify; and a really serviceable chemical laboratory. The Cabildo or Law courts, and the Orphan Asylum complete the list, as the School of Mines, that once upon a time was flourishing, and ought to be so still, considering the large stake this province holds in mining industry, has fallen completely to decay. The private dwellings are rapidly approaching the style of those on

the littoral, in terraces, but the pride of Catamarca is centred in its superb cathedral, without doubt one of the finest in the republic, which, not yet finished, is added to yearly as funds flow in. Commenced in 1859 on the able plans and under the direct superintendence of Padre Lewis, a Franciscan monk attached to it, but who, before donning the religious habit, was a celebrated architect in Italy, it has already cost 212,431 Bolivian dollars (£35,000); but as the complete design includes an ecclesiastical college adjoining, a further outlay of 150,000 on this account will be necessary. The style is Italian, with two towers, one of which contains a handsome clock striking the hours on really musical bells, a rarity on Argentine soil, and a fine dome, the summit of whose cross rises to the height of 160 feet; the nave and aisles, in the form of a Latin cross, measure 220 feet by 90, exclusive of the numerous side chapels; the roof is of bóveda (solid masonry) without a beam; and the floor laid with solid blocks of native hard wood marquetry, susceptible of a high degree of polish. As glass of any kind is scarce in these provinces, notwithstanding the abundance of its elements, the stained windows, as may be imagined, display neither art nor taste, very common faults in all the churches of the republic. The grand chancel altar, of fine Carrara marble, a work of great beauty, cost with its reredos the sum of 20,000 Bolivianos: on either side is a lifesize figure of a kneeling angel sculptured in Piedra Saltrio, each weighing a ton, and brought from Italy at great expense; the

exterior steps leading to the façade are also of the same durable stone. The pulpit, likewise the design of Padre Lewis, exhibits Sybaritic taste and is exquisitely carved in native cedar and walnut, relieved by ebony and gilt moulding, upon which an Italian carpenter in Catamarca expended twenty-one months of incessant labour. This metropolitan church boasts further of a fine large organ, manufactured in the town at a cost of 20,000 Bolivianos, but the heaving bellows of Cecilia's vocal frame have never yet learned to blow and its pipes are mute, as musical education has not yet taken sufficient strides in Catamarca to produce an organist. A lady of my acquaintance however was permitted by the cura to make it speak and when the vaulted roofs resounded with the somewhat irreverent thunder of operative strains, great was the astonishment of the populace who thronged the aisles. Descending from the organ loft and advancing up to the altar which was profusely dressed with lights and decorated with flowers, we were astonished to notice swarms of the large black ant streaming up and down the table and reredos in thick dusky lines sacrilegiously robbing the mercy seat of its adornment and bearing away their floral spoils beneath the wooden flooring, where no doubt they had pitched their nest. In this magnificent temple do the fair Catamarqueñas daily spread their carpets and worship, and it is a remarkable sight to watch them wending their way thitherwards in early morn, each attended by a little Indian maid carrying the fringed square of Kidderminster whereon to kneel,

Strangers naturally wonder that in a district so poor and sparsely populated, such colossal designs, so far in advance of present requirements, should be propounded and carried out; and if native resources were alone taxed, the surprise might be natural; but it is usual for certain shrines, in which noted religious festivals are celebrated, to be enriched by the gifts of pilgrims, and such is the case here. This magnificent pile, temple and projected seminary, is the offspring of the pious votive offerings of pilgrims from all parts of the republic, and even from Chili, Bolivia and Brazil, who arrive annually, numbers on foot, to pay their vows at the shrine of the Virgen del Valle (Virgin of the Valley), where many miracles are reputed to have been performed. During the fifteen days' function of the festival of the Virgin, held in December, as many as 20,000 such strangers flock into the town, whose contributions reach an annual average of 15,000 Bolivians. Many of these devotees however are too poor to present oblations in money and so bring for sale articles of native manufacture, many of great beauty, which they dispose of for a mere trifle, and with the proceeds discharge their promesas (vows) to the Virgin.

Many years ago the idea of erecting such a cathedral was entertained, but no funds were then available wherewith to make a commencement; so the priests in a self-denying spirit determined at last to devote to that purpose these benefactions, which during the last twenty years have sufficed to raise a monument which will speak in after ages

to the taste, piety, providence and munificence of Padre Lewis and his ecclesiastical brethren.

The environs of Catamarca are one mass of groves and vineyards, producing abundance of oranges and wines as well as olives, the first of very superior, the second of inferior quality, owing chiefly to defective methods of manufacture, nevertheless drunkenness is universal, which however is not so much the fault of vinous as of alcoholic imbibition, as unrectified spirits of wine is the favourite drink which the lower orders especially take for the purpose of getting intoxicated. Yet in spite of this vice the people are hospitable and sociable and free from that formal stiffness which characterises their fellow citizens of Rioja: due probably, amongst other reasons, to the classic nomenclature by which they, especially the working classes, are designated. Aristoteles, Diogenes, Dionysius, Mithridates, Telemachus, Neoptolemus, Cleobulus &c. are common appellatives: how are you to treat a man servant with the high-sounding title of Agamemnon? ignore history altogether? or show him the consideration due to his prænomen? but what astounded me most in this matter was, that José Maria and even Jesus Maria are here very general names for men.

I was very much gratified at the universal custom of offering gifts, either to fresh arrivals, or on the occasion of any domestic festivity, nor less amused on witnessing the way in which the Catamarqueños ask favours by conferring benefits, prefaced with a lengthy preamble.

When seated at breakfast or dinner, in comes noiselessly a little dusky Indian urchin or maiden, with a salver covered by a very fine white cloth, on which there is some delicate cut glass containing perhaps a little dulce (preserve); this is placed on the table and the bearer crossing his or her arms, stands straight in front of you, looking steadily in your face, and begins the harangue: Misia Pepa (Misia used instead of Doña) sends her compliments and: How are you? How did you awake this morning? And your mamma? How is your dear mamma? How did she awake this morning? and so on through the whole family, without omitting a single member, even to the vicesimus or vicesima; and then as a wind up, comes a summation of the series ¿está todo bueno? (Is everybody and everything all right?); in this catalogue they will not be interrupted and if you attempt such a course, there is nothing for it but to run the gauntlet afresh. When they have finished the exordium, comes the application forthwith, "Hágame el favor de prestarme" (Have the kindness to lend me), a kitchen pot, pan, blackingbrush, or some other simple utensil. Whereupon the lender has to commence a similar reciprocal greeting with reference to the other family, to which the messenger listens with fond devotion, carrying off the coveted article and the lengthy salutation, every syllable of which he or she religiously delivers. The same verbosity characterises even the beggars; it is quite an infliction to listen to the number of blessings they invoke, when perhaps you have only bestowed two cents

(a halfpenny); many times have I refrained from giving alms on this account.

The climate has always hitherto been credited with the very best of reputations; four years ago indeed, the inhabitants were acquainted with that scourge of the Upper Provinces, the *chuchu* (a species of intermittent fever), only in name; since that time however it has resided permanently in their midst, and last season, one of the driest on record, a few of the victims succumbed to its fatal influence, an inexplicable fact, taking into account the proverbial dryness of the atmosphere, the altitude of the city 2,200 feet above sea level, its sloping site and consequently perfect drainage.

Throughout the Argentine Republic the 25th of May is celebrated as the grand National festival: but in Catamarca as elsewhere, by a species of fiction, the festivities really commence on the 24th, and happening to be sojourning there at that date, I became an eye-witness of the auspicious gaieties.

A week in advance, the Chief of Police was busy with his gang renovating the Plaza, publishing edicts for the compulsory whitewashing of houses, the repairing of dilapidated walls and ragged footpaths, and the covering of odoriferous drains: everything had to wear a spick-and-span new appearance on this the Nation's birthday; and further, every householder was obliged to hang out the national flag by day and by night to suspend a lantern at his street door.

Sunrise of the 25th was ushered in very poetically by the shrill treble salute of hundreds of the

public school children who, drawn up in the Plaza dressed in the national colours of blue and white, poured forth from their infant pipes the spirit-stirring strains of the Argentine anthem, to the accompaniment of the military band; and the lustrous star, brushing aside his misty morning envelope, paused to listen to the glorious pæan. This was immediately followed by a more masculine greeting from stentorian iron throats belching forth, amid fire and and smoke, a salvo of 21 guns, which the greedy air, loath to lose, bids the neighbouring mountains prolong; the regiment of National guards meanwhile presenting arms. An adjournment then took place to the Government House, and after the serving of refreshments to all comers, an early morning dance served as an introduction to the more serious duties to follow: for the Argentines are a dancing race, and no rigid European rules are allowed to interfere with the natural inclinations of the people. After dispersion for a while, came a general summons to the Cathedral to attend the grand mid-day "Te Deum," irreverently styled by some the "Tedium," where a gorgeous ceremonial, not unknown to the Romish church, was provided. During the day the Plaza presented much the same appearance as one of the glorious old English fairs, so dear to my boyish imagination; even the time-honoured greasy pole was there, whilst the identical band of the morning, with lungs as well as instruments of brass, kept on blow, blow, blowing, the whole livelong day; and at the setting of the sun, the same for-

malities were observed as at its rise. But it was at night that the spirit of the Catamarqueños rose to the occasion. A magnificent ball was prepared in the Normal school, whose splendid suite of rooms offered the greatest facilities in the town, the adornment of which was undertaken by a corps of volunteers two or three days in advance, and all the articles of luxury and taste were lent by the different families. Two hundred invited guests assembled at the early hour of nine to beat the guileless earth until four the next morning. The programme contained about 26 set dances, Mazurkas, Quadrilles including the hoary Lancers', Waltzes, Polkas, and the Gato (a native country dance); but many other indigenous ones with fluttering kerchief or clattering castanettes were furtively introduced in spite of the master of the ceremonies. Two suppers were given, a light one of sweetmeats at 11½ p.m. and the other a very substantial repast at 2½ a.m., very much resembling the stereotyped English. At every ball, whether public or private, given in this province, what is called a Mosquetaria (ante-room) is set apart for the outside public not invited to the sacred precincts, where, having a full view of the gay assembly, they can go and watch proceedings, and on this occasion vast numbers went to mosquetear (look on).

Just at this period unfortunately, political strife was rampant in the city, due to the approaching presidential election, which was so hotly contested throughout the Republic, even to bloodshed, and this state of feeling sadly marred the

night's festivities; for as the party in opposition to the government refused to attend, and their families included most of the pretty girls, the gentlemen found suitable partners scarce, whilst no doubt the beauties were biting their nails in blank disappointment at home. A guard of honour composed of 25 gendarmes was told off to watch the various entrances to the ball and especially the supper room, as the Catamarqueños have a playful way of entering, whenever an opportunity offers, and helping themselves to the viands and taking long swigs out of the various wine tankards. After the preliminary supper, the young men began to get rather fresh, but after the second, uproarious; and directions have been privately given by the authorities, with parental solicitude, to close the doors in order to prevent the guests retiring too early, one of them accompanied by several ladies attempted to pass the sentinel without the countersign, upon which a struggle ensued, causing the ladies to faint and scream, and amid loud cries of revolution, a general stampede took place. The captain of the guard was loudly blamed for the confusion, whereupon he and his merry men swaggered about in the utmost indignation, declaring furiously they would never serve again in a similar capacity: this was succeeded by a general rush to the half empty bottles of the supper room, where the general uproar culminated and thus what was a scene of simple festivity degenerated into a bacchanalium; so that when four o'clock arrived, it was no easy matter to get rid of the fuddled guests, amongst whom the guardians of law and order were not the least conspicuous.

CHAPTER XL.

TRIP TO RIOJA, CATAMARCA AND TUCUMAN.

CONTENTS:—Catamarca a pleasant place to sojourn in—Watches that will not go—A Memnonian melody—Geological formation of Sierras and plains—Three hundred mines in working—Messrs. Lafone and Carranza the enterprising miners—The transmutation of copper into gold—Revival of Alchemy—The new alkaloid “*Aspidosperma*”—Mineral springs—Indigenous therapeutics—“Well! there is not so much danger to be apprehended from the Cholera, it’s the Morbus that’s to be feared!”—The lost ten tribes—Quichua flickering in the socket.

Catamarca is a pleasant place to sojourn in, as the climate is dry and healthy, the site picturesque, living cheap and plentiful, and the people given to hospitality, courteous and intelligent. The rides eastward of the city are numerous and remind me very much of Mendoza, or the environs of San Juan; real Devonshire lanes, closed in with foliage, adorned with parasitic flowering plants, the resort of numerous Humming-birds; in particular, the villages of Cholla, an Indian suburb in which lies the city cemetery, Chacarita and Piedra blanca, to reach the last of which, a place of some impor-

tance as indicated by its church, restaurant, billiard table and store, the traveller passes through a set of intervening straggling but picturesque hamlets, extending four leagues, each of which is provided with its church. These rural spots in turn invite the wayfarer to visit them and revel in their orange and lemon groves, that yield four varieties of the former and as many as ten of the latter. However much the wines commonly drunk in the town disappointed me after those of Mendoza, in some of the departamentos of Catamarca they are splendid, and the country people generally not only possess the knowledge and exercise the care requisite for profitable viticulture, but taste and industry in the manufacture of superb lacework, embroidery, artificial flowers, bedquilts and ponchos; yet in the city itself there is a sad want of ordinary skilled labour; for instance, although the inhabitants wear watches and chains of very loud pattern, it is difficult to tell the hour, as not one time-piece in a thousand goes, in consequence of there being actually no means of getting them repaired.

A very peculiar circumstance, of almost daily occurrence in the city, strongly excited my curiosity. An hour before daybreak, a threatening rumbling sound is heard, not loud but still distinct, which, if he happen to be awake at that unearthly hour, somewhat dismays the stranger and suggests to him the alarming herald of an approaching earthquake. A wind always arises at that time, and I believe that its passage through a subterranean tunnel connecting two extinct volcanos, one in

each of the neighbouring sierras, produces in this natural organ pipe of four leagues' length the Memnonian melody in question.

The sierras of the Province of Catamarca consist principally of crystalline rocks, granite, mica-schist, gneiss, &c., and where the prurption of trachyte occurs, there mineral veins may be looked for, as for example at the Capillitas, 80 leagues northwards from the capital, in the Sierras of Atajo, a district very rich in copper ores, principally in the form of the sulphuret and arseniuret, as well as in lead and zinc, containing a fair percentage too of gold and silver. These mines yield annually from five to six hundred tons of pure copper. On my way to Catamarca I met a string of mules from Capillitas proceeding downwards to the coast, laden with 150 bars of pure copper, weighing 175 lbs. each.

In the western parts of the province however, signs of recent volcanic eruption are to be met with, in the form of obsidian and its vesicular variety Pumice-stone. Tertiary rocks or sediment fill the valley of Gualfin, which lies to the west of the Sierras of Atajo, and seem likewise to underlie the alluvium of the great plain of the Fuerte de Andalgalá which, 25 leagues by 25 in extent, occupies the centre of Catamarca. In the valley of Santa Maria at the extreme North, the same tertiary formation is observable in combination with gypsum and on the highest parts of the adjacent range of Aconquija some remains of this period are likewise visible.

Although mining is in its infancy here as in all the other provinces of the Republic, the mineral wealth of Catamarca may be judged, when it is stated that from two to three hundred mines already exist in it, yielding gold, silver, copper, lead, zinc, marble, rocksalt &c.; yet notwithstanding these are generally worked by very crude methods, a very intelligent English gentleman, Mr. Lafone, as well as an extremely enterprising native, Señor Carranza, have succeeded in bringing their several extensive establishments to a high degree of perfection, with rare skill and complete success. The rich mines of the former at Capillitas supply his smelting works at Pilecio with such good material, that in a late year, 11,000 quintals (100 lbs. Spanish) of copper ore produced besides cupric wealth, 50 quintals of silver and one of gold, and this, without the aid of transmutation. It is but lately that a Frenchman named Parchappe, living in the Cornwall of South America, duped the Chilians, those miners *par excellence*, into the belief that he could transmute copper into gold, and succeeded so far in playing upon their credulity that a strong company was formed and a large sum of money subscribed, but unfortunately being compelled to make a public exhibition of his powers, found himself in prison at its conclusion; one of the influential foreign newspapers of Buenos Aires, celebrated for the width of its mental gulp fanned the scheme with all its might; verily with all our boasted science, we are little better at bottom than our brethren of the dark ages.

In a subsequent chapter, additional particulars will be given, with reference to these valuable mineral interests, when my second visit to Catamarca en route to the extreme northern provinces of the republic, comes to be spoken of.

The physical features of the province of Catamarca are bold and varied, although deficient in one of the main elements of a landscape, water: snow-capped mountains interspersed with luxuriant valleys; extensive and arid plains, covered with sand dunes or salts, plains that speak of death but which need only the presence of moisture to start into vigorous life; and noble virgin forests filled with splendid timber, in turns diversify this vast area. In the fruitful alluvial soil of the valleys, all the vegetable productions of the earth might be concentrated: and whilst in the wastes the *Cactus* (*Opuntia*) bears abundantly its cochineal, the Jume (*Salicornia*) its soda, and the ground is covered in extensive districts with plants, chiefly *Verbenaceæ*, from which ethereal oils might be profitably extracted, such as the Polo (*Lippia turbinoides*), the Ahazar del Campo (*Lippia Lycioides*) &c., and the forests abound in valuable woods, especially the heavy (1.35), hard and dense Quebracho colorado (*Loxopterygium Lorentzii*) a strange tree, the pores of whose timber are stuffed with a mixture of crystallized gum and tannin, but in whose bark these ingredients are separately elaborated, and the Quebracho blanco (*Aspidosperma quebracho*) from which the new alkaloid "Aspidosperma" is obtained; both the climate, which is very enjoy-

able, and the soil generally, are extremely suitable for the cultivation of many plants for industrial purposes, such as the Mulberry for silk, and the Castor Oil for soaps.

As in Mendoza, San Luis and San Juan, the mineral springs of Rioja and Catamarca are numerous and of high repute, but their remote situation and the want of roads, render them almost inaccessible. Of these, the alkaline-acidulate thermal baths of the valley of Gualfin and of Fiambalao; the acidulate-calcareous spas of the Quebrado de los Hornos, all three in Catamarca, and saturated with free carbonic acid; and the sulphurous thermal waters of Machigasta in Rioja, are the chief whose constituents have been analysed.

As may be supposed, the country districts in these wide-spread and remote Upper Provinces, are left almost entirely to the mercy of indigenous therapeutics, and in consequence a class of Curanderos (quack doctors) has sprung up, in whom the people generally place implicit faith; in fact, the rural territory of the Argentine Republic forms one vast empiric Elysium; and yet these men, relying alone upon herbal remedies which are abundant, especially in Catamarca, and many of which are entirely unknown to European pharmacopœias, do perform some wonderful cures. One of these charlatans however set up in very high style, a few years ago, in the neighbourhood of the city of Catamarca, and just being able to read, made himself acquainted with a limited professional vocabulary. On being called in to a cholera patient, and

asked whether there was any danger, the Quack, after a learned pause, replied, "Well! there is not so much danger to be apprehended from the cholera, it's the Morbus that's to be feared!"

Sprung from a mixture of Spanish with native noble Quichua blood, simple, patriarchal races are those of Rioja and Catamarca, especially the dwellers in the rural districts: indeed their general Pashalic appearance with their long beards and aquiline features, their grave, simple and dignified bearing, their frugality and yet hearty hospitality, the aspect of their red ochrous earth, their sandy deserts and cisterns, their flocks and herds, point backwards almost to the times of Abraham and lead the mind with a certain degree of gravity to contemplate the possibility of their being linked in lineage with the lost ten tribes. Such Oriental characters are not possible in Europeanized Buenos Aires: in fact, there is as great a typical difference between the Porteños and the rustics of Upper Argentina, as between the inhabitants of Paris and the Arabs. In these two provinces, the ancient unwritten Indian tongue, the Quichua, the language of the Incas, is still heard although flickering in its socket, yet the monumental memorials of that remarkable people are not few: engineering works which are still the admiration of their supplanters; an extensive system of tombs at Calingasta, where their mummies are found sitting upright in expectant attitude, and which, on account of the siccific nature of the climate are in a perfect state of preservation, even to skin, hair and nails; the melodious

and expressive names of places, numbers of which still end in *gasta* (town); are some amongst the numerous footprints of an illustrious race, that must have been endowed with high intelligence and no common taste, and its causes regret to admit the necessity under which it has been made to disappear.

CHAPTER XLI.

TRIP TO RIOJA, CATAMARCA AND TUCUMAN.

CONTENTS:—En route to Tucuman—Coach hawking—A fine road, a rare circumstance in the republic—Our appetites culminate with the sun—A disinterested interview with a pasha—An eighteenpenny lamb for breakfast—Cockfighting—Will Wimble—Elephant traps—The finest highway in the country—An arabesque of sentiment—A gang of stone-breakers—The accomplished *Psittacidæ*—The village of Viña without a grape—London goods for export—Rice, maize and pepper pounding—Picturesque cottages—A sweet smoke—Nebo—Entrance into a tropical region—Multitudinous streams—A false step and its consequences—A rat trap—Caught as by birdlime—A Styx—Biped ruminants—Gigantic laurels—Description of a sugar factory—A sleepless night—Chuchu and its remedy.

I was anxious to proceed to Tucuman for letters and remittances which I knew to be awaiting my arrival there. For any one not caring to ride the whole distance on horseback, the usual course would have been, to take the diligence from Catamarca to San Pedro, a station on the North Central line, distant 30 leagues, a journey of a day and a half, and thence by rail to Tucuman, occupying five additional hours; but I preferred a more direct, although slower, route.

In the province of San Juan, the industry of coach making is advanced and forms a considerable trade. Native woods are alone employed and

found superior in hardness and polish to those imported, as well as cheaper and more accessible, and the result is that these coaches find ready sale, especially in the northern provinces of Tucuman, Salta and Jujuy. To export them thither, it is the custom to drive them the whole distance, and so they have frequently to hawk their vehicles many hundreds of leagues before meeting with a purchaser. By intercepting one of these coach convoys, the traveller may enjoy a cheap and comfortable excursion, as their springs and cushions stand in remarkable contrast to those of the lumbering diligence. A cavalcade of this kind from San Juan bound to Tucuman happening to pass through Catamarca just at the right moment, a friend and myself made an advantageous arrangement for the forty leagues' trip with the owner who was acting as conductor, and who fortunately turned out to be an old acquaintance of mine from the former city; and on our joining this western caravan, we found it consist of three carriages and their drivers, together with thirty horses and mules under the charge of three peons.

Passing out of the city by the eastern side, close by the site on which a fine new Hospital is about to be built, a long winding road, lined with alfalfares, vineyards, hedges and trees, leads to the pretty suburban village of Chacarita, and thence across the dry bed of the river San Isidro to the beautiful rural town of the same name, a spot that, intersected in many directions by lanes of surpassing loveliness, lies embedded in a luxurious vegeta-

tion both natural and artificial, in which vineyards and orange groves vie with the flowering creeping plants to enrich the scene and shed a perfume that attracts numbers of gaudy humming-birds. San Isidro has a neat little plaza, containing a church unfinished as yet, and as we wind along the lanes and cross numerous irrigation rivulets, captivating country-seats peep from among the massive verdancy, which we soon perceive exists only by sufferance, wrung from the hand of the desert. Suddenly we are confronted by at least a league of sand desert, covered with an insignificant growth of prickly plants, in which, as the wheels sink to the axles in the fine yellowish particles, our progress is very laboured and slow towards the lofty Sierras del Alto that form the eastern wall of the valley in which Catamarca lies; but we now turn in a more northerly direction and head for some low hills close in front, and as a halt is called for a few minutes to breathe the horses, leisurely cast a last fond look at the city, distant perhaps three leagues on the other side of the valley, and which creeping somewhat up the slope that leads to the base of the massive western range in the background, is confounded in the haze of distance, all save the lofty church towers, which serve as a beacon far and wide to the weary feet of the Christian pilgrim.

Resuming our seats, the ascending road meanders amongst the hills for about a mile, along a deep sandy highway, and then is exchanged for a fine built-up macadamised turnpike, half a mile in length, hewn from the adjacent rock, and which

leads directly but precipitously to the Portazuela, a bold cutting on the summit, which as its name (little gate) indicates, introduces us to the descent on the opposite side. So rare a sight is it to see a good road in this country that even the beasts of burden prick up their ears in wonder, and enquire how it is that some of the money that is uselessly squandered in various profitless concessions is not more generally expended upon facilitating communication in the interior. This fine piece of engineering however is only an *avant garde* of what we see in crossing the Sierras of Totoral, some twelve leagues in advance. As we descend gradually on the other side of these hills, the heavy sand again presents itself, necessitating constant stoppages to rest the animals, and during the months of August, September and October, in which the Zonda blows its furious sand-laden oven-blasts, reaching its maximum in September, travelling over these arenaceous wastes brings torture to man as well as beast. A fine long valley here opens out before our view, containing cultivated fields and estancia houses, wherein is soon developed a pretty little village nestling amongst gramineous verdure and orchards, and intersected in every direction by bubbling runnels; whilst hereabout the Jarrilla (*Larrea divaricata*) grows abundantly, a sure indication of fitness in soil and climate for the successful cultivation of the vine. Passing through this hamlet and still descending, our road lies across the bed of a river almost dry at present, by reason of excessive irrigation and

the porous nature of its bottom, but which, as attested by the depth and width of its channel, and the massive tree trunks that rear their threatening heads from out the sand, must sweep by as a mighty torrent in the rainy season which happens in January and February. We now make for the northern and higher extremity of this somewhat narrow but fertile and populated valley which, clothed in many parts by thick arboreal vegetation, chiefly algarrobo and quebracho interspersed with giant *cacti*, and here and there a magnificent Chañar (*Gurliaca decorticans*), one mass of lovely golden flowers that emit an exquisite scent, has in all a meridional direction, and through whose whole length, bearing southwards, winds tortuously the river that we have just crossed; on our right lie lofty scarped mountains, on our left the low hills lately traversed and which themselves are rapidly merging into bolder masses: the air meanwhile being kept alive by the interminable screech of parrots and parraqueets, the drumlike roll of the woodpeckers' tap, and the darting evolutions of an army of Flycatchers.

Having now changed horses, we push on again and, in places where the road runs along the face of the hills on our left, perhaps fifty feet above the bed of the river which now has water in it, probably due to infiltration from its upper course, we catch sight of pretty rural landscape on the opposite side of the stream, which must be exquisite when the woods, meadows and dividing hedges are clad in their new spring suit of vivid green.

Houses are scattered along the road, which is further rendered lively by the traffic of troops of mules and carts which continually traverse the valley, bearing wines from Rioja and Catamarca to Tucuman. One of the largest businesses in fact in Catamarca is that of the Molinas, who own at least four thousand mules in constant employ. Here we pass a village smithy at work in the open air under the shade of a patriarchal algarrobo, whose spreading branches support the bellows and other pendant vulcanic apparatus, whilst sundry stumps serve as pillars to sustain the anvil and its fellow heavy implements.

As the sun had already culminated, so had our appetites for breakfast; we therefore kept a sharp look out for any dwelling likely to afford the means of appeasing hunger, and unceremoniously applied wherever a stray sheep or goat was visible, but always unsuccessfully as, although size was immaterial to us, the owners either would not part with a full grown bleater or thought the young too small for food; until at last, espying a group of ranchos close to the road and a fine flock of goats browsing on a rising ground not far distant, and another equally fine one of sheep and lambs grazing near us on the river bank, we thought our morning meal secure.

Hastily descending from our carriages, we proceeded in a body to interview a fine old snowy-bearded patriarch, who was seated in front of his door in the shade of a gnarled algarrobo tree, a dozen or more bronzed and stalwart fellows moving

around bent on their various employments. Although anxious to commence the campaign and come to the point forthwith, our eagerness was restrained by the customs of the country, which demand first the interchange of lengthy civilities, without which no request stands a chance of being entertained. After the usual salutations then, our hosts scraped together all the available and polymorphous chairs, many of which needed a course of diaplastics, and invited us to be seated, subsequently offering *máte* and cigarettes. We had providentially taken with us that which unseals most men's lips as well as their hearts, and the preliminary courtesies ended, proceeded to inquire of the venerable pasha as to his family, their health and his own, and his mode of life, approaching the subject of his live stock most cautiously and disinterestedly, when by a judicious seasoning of the conversation with invitations to the spirit flask, the old man at last agreed to let us have a fine lamb for four reales (1s. 6*d.*), which we forthwith shouldered and bore to our trysting-place. Each hungry guest contributed something to the feast; one bread, another cold fowl, a third cheese, a fourth wine; so slaying and skinning the lamb and roasting it over the embers, we prepared for a sumptuous breakfast: the term sumptuous in fact can only be understood under such circumstances; the gourmand issuing late from his chamber in dressing gown and slippers, and entering a cosy breakfast room to taste highly seasoned dishes, is wide of the interpretation. As we near the Sierras of Totoral,

which the road out of this valley crosses, the scene changes somewhat, for now our route lay not only along a good hard level road but in the midst of a district well watered and more abounding in vegetation and trees than hitherto, and moreover rendered very busy by a numerous and thriving population, whose homesteads are well supplied and look gay with the stores of vegetables, as they lie on the roofs in their amber, green and scarlet hues undergoing the process of drying, the whole zapallos (pumpkins) hanging skilfully cut in one continuous spiral strip as thin as paper and without a break. Moreover outside almost every roadside rancho, or adobe house throughout the valley, a table is spread with a nice clean white cloth, on which are exposed tortas (baked unleavened bread), a few bundles of chala* cigarettes and sometimes an array of sweet cakes made with arope, or syrup from the grape, for the use of travellers.

Casting our eyes over the mountains on our right, we observe that their character is now modified; whereas their summits were bold, rugged and serrate, they have now become gentle, sloping and domeshaped, and covered with long grass so as to form the loved haunt of the guanaco; changes such as these are remarkable in an unbroken chain.

Untiringly pressing on till evening along this pleasant and picturesque road, we at length reach the straggling district of the Amadores (Lovers),

* The finer fronds of the envelope of the maize cob, which is used instead of paper to roll up the tobacco in.

which comprehends several hamlets and straggling dwellings; but what attracted our attention here as elsewhere on this route was, the immense number of pulperias or small shops, of infinitesimal stock, where drinks and sundries are retailed, and which having to pay an annual license of £7 each, must find it hard work to keep the balance on the right side. On Sundays however, crowds of men frequent a favourite pulperia, tying their horses to the rails in front or beneath a neighbouring tree, and clustering in a circle under an adjoining shed, indulge in cockfighting the livelong day, varied by occasional adjournments to the bar. But no sooner does the sun set than the music strikes up, the dance commences, and together cease not till sunrise on the following morning.

Night was now falling fast and as the last reflections of a very limited twilight struck our vision, we draw up at a fine large building at Monte Potrero, belonging to one of my fellow passenger's friends whom unfortunately we did not find at home. The capataz however allowed us to remain the night, whilst our animals were put out to graze in the magnificent alfalfares adjoining.

The rambling dwelling occupied two sides of an extensive square courtyard and had a fine corridor running the whole length of its two fronts; the remaining sides being filled with outhouses and sheds. In the centre of this enclosed yard stood one or two fine old trees spreading a dense shade over the greater part of it, and as we, after groping about in the thick darkness and stumbling over stacks of dry

tobacco stalks, the refuse of the late harvest, and heaps of pumpkins, drew up our carriages beneath their arboreal shelter, we had the satisfaction of dislodging a cloud of roosting fowls and disturbing a colony of cackling geese, which predicated well for supper. Alas! we reckoned without our host, for in his absence, nothing was to be had, the cupboard was bare not only of food but even a rush-light; hence before any dinner could be cooked, we had to hunt up provisions all along the road from neighbouring ranchos; the fact is, we were not enterprising, for if Will Wimble had been of our party, it would have gone hard, but that he would have got a meal out of one or t' other of the adjacent poultry. The frugal repast did not detain me long from putting up my catre under the corridor and falling fast asleep till morning when, rising early we crowded round a log fire to sip maté, which to my taste is more refreshing than tea; and whilst the peons were catching and harnessing the horses I took a stroll along the fine road that, surrounded by alfalfa fields dotted with fine old gnarled heavy timber, and guarded by thick hedges, the whole parklike scene doing credit to its name Monte Potreros, leads straight to those grand mountains, a mile or two distant, whose summits are clothed with abundant grass and bases buried in arboreal magnificence. Indeed, the whole of this district, in years gone by, must have formed a vast forest, as the potreros on the road side are here surrounded by squared logs of transverse section exceeding a square foot, which reminded me of

elephant traps. At eight o'clock we again embark, passing numerous houses and villages of Monte Potrero and La Merced, a region of deciduous foliage, and turning more to the eastern side of the valley, head for the Sierras of Totoral in our front, passing by a village of the same name, and then up an incline where the foliage is evergreen and which leads direct to one of the finest highways in the Republic, just before reaching which, in order to relieve the cattle, we get down to walk up the difficult ascent, and now on looking up the valley that we are about to quit, our attention is arrested not only by the extensive oases beneath, but by the bold outline of hoary-headed Aconquija which, far away to the northward, splits the clouds at an altitude of 19,000 feet. The highway upon which we had just entered, the Watling-Street of the Republic, is a piece of engineering work remarkable in a country where road-making is in its infancy. Cut out from the solid rock, flanked here and there by stone parapets, and supported, especially at the curves, with forty or fifty feet of solid masonry, and winding in a zigzag up the mountain side, it reveals its glistening, chalky, mazy thread at a distance of ten leagues, as it stands out from the densely green, rank foliage, in which it lies embosomed. Here lovely beds of moss, and ferns hanging in festoons from the rocky face of the mountain, vie in delicacy of form with the more ambitious flowering plants distilling their delicious perfumes. Although the horses were now refreshed, we still prefer to jog along in front of the

carriages on the delightfully smooth, compact, yet steep ascent, to cull some modest fern from its damp and rocky niche, watch the air gambols of the pretty Fly-catchers, follow the dart of the numerous Humming birds, or listen to the noisy but gay *Cyanocorax pileatus* as it hopped in crowds from branch to branch; it was a scene attuned to my nature, an arabesque of sentiment! but as we had now worked our way so high as to enter the clouds, which were observed all the morning gathering around the summits, and as the valley below was hidden from view, and it began to drizzle and shortly after to rain, we had to abandon the indulgence of emotion and take refuge in the carriages. Thus slowly but comfortably soaring into the very rain-forming region which, although devoid of arboreal life, abounds in *pasto duro* (coarse grass) and is very suitable for cattle farms; and along a road which, in spite of the now heavy downfall, held no water, as it was drained so perfectly with masonry ducts, we near the summit, espying at the same moment a couple of ranchos with a corral full of cows which the people were milking, and where we pull up not alone to rest the animals, but slake our thirst with what notwithstanding the abundance of kine and goats is a rarity in this district; and just this side of the highest point there came in sight the Diligence bound from San Pedro, a station on the Tucuman line, to Catamarca, with whose passengers we exchange a little gossiping news, and in a few minutes surmount the range and before entering a deep stone cutting,

during a momentary break in the clouds, dart a glance behind to view the valley backed up by lofty mountains, and then commence the descent along a white glistening road full of abrupt precipitous and dangerous turns, the scenery around being characterized by well-wooded but very broken hills gradually lessening in size as we proceed, but which form watersheds for the numerous streams, mostly fringed with watercress, that intersect our path in the valley beneath, on reaching which our surprise was great to find that the descent on this side is fully three times as long as the ascent on the other.

A gang of men repairing the road, as in England, troops of carts wending upwards with goods from the railway, and every now and then a horseman, with a green, red, and yellow Parrot (*Chrysotis amazonica*) perched knowingly on the back of the saddle and for ever garrulously repeating verses, at one time amatory, at another political, render the highway lively.

AMATORY.

Lorito overo por embustero

Me veo soltero, me veo soltero!

Turulurulá.

POLITICAL.

Roca me dió una cinta,

Tejedor me dió un cordon,

Por Roca daré mi vida,

A Tejedor mi corazon.

Of the many species of the *Psittacidæ* found throughout the provinces, and of which twelve have come under my own observation, though all are monogamous, they are very prolific; you meet them everywhere and in spite of their destructive-

ness to crops, they are very general favourites and become exceedingly tame and accomplished, practising their performances with all the assiduity of a distinguished artiste, and even correcting themselves when they make mistakes; and on the whole I consider the *Chrysotis amazonica* especially, capable of a higher education than the African grey parrot (*Psittacus erythacus*).

About half-past one we arrive at the village of Viña, four or five leagues beyond the Sierras, a hamlet which, nestling among hills, surrounded with meadows and intersected by brooks, reminded me somewhat of Dovedale in Derbyshire, and thinking it high time for breakfast, proceed, as yesterday, to ransack every rancho for wine, bread and meat, but in spite of our utmost vigilance, the only result of repeated dunning was to secure a single zapallo, a little rice, much ají (*Capsicum microcarpum*), and a solitary superannuated hen which, like the London goods for export, is a trick usually passed off upon starving travellers who have no choice but Hobson's: but of wine in this district of Viña (vineyard) we were unable to find the faintest trace. Fortunately in passing through the woods, I managed to shoot a fine wood-pigeon, so we stopped and set to work to make the most of our limited resources. A caldo (broth) was soon in process, containing the ancient fowl, the wood-pigeon, rice and scalding pepper. The custom of the natives is to pound the rice and maize in the ear by means of a long wooden pestle working in the hollowed, upright, moveable stem of a tree, the right hand

using the pestle and the left quickly alternating with the stroke in turning over, and raising the mass into the air, and as it falls again allowing the wind to carry off the chaff; but if the rice, maize or ají has to be ground into meal, then a horizontal trunk is employed, in which several shallowish indents are made, having a heavy, round stone working in them. The cottages here as everywhere else in Catamarca and Rioja look very picturesque from a distance, as though covered with lovely creeping plants of all hues; this arises from the habit of drying fruits and vegetables on the roofs, a custom before referred to; thus oranges yield a bright gold; zapallos an amber; ají a scarlet; beans a white; grapes, figs, peaches and pomegranates a rich brown or purple; and cochineal a lake; the climate is so desiccative that nothing turns to corruption. In Rioja the staple food is maize; in Catamarca rice and zapallos, seasoned to a degree with that terribly scourging ají, small pieces of meat being sometimes added to the curry. Although rice would grow uncommonly well in the latter province, it is but little cultivated, and dependence is placed upon a supply from the sister canton of Tucuman; but the inhabitants smoke nothing else than native grown tobacco, which much resembles Turkish, and when rolled up as a cigarette in the chala, presents one of the sweetest modes of inhaling the fragrant weed.

The old hen was proof against mastication, so what with the late breakfast and short commons, we began to look about hungrily for a supplement

to our slight meal, and luckily espying an enormous pile of luscious oranges on a neighbouring roof, hurried thither to bring away a large basketful for a few pence.

Although Viña, the region of former vines, captivated us by its natural beauties, its charms were powerless to detain us beyond the time necessary for our morning meal, when we at once parted from the pretty vale to ascend its encircling hills, from the highest point of which, a fond retrospective glance at the valley behind is succeeded, as from a Nebo, by a distant prospective view of the promised land of Tucuman, as it lay stretched out in vast, rich plains, occupying all the expanse to the north east of our road, whilst the mountains are left in serried masses on the west. Rattling down the winding roads on these the last hills on our route, and debouching upon the seemingly boundless plains, the scene becomes truly park-like; beautiful grass lands dotted with fine timber clothed in Spring with a rich foliage of light green, and without any undergrowth, whilst the hills on our left display the gorgeous pink flowers of the magnificent Lapacho. This luxuriant arboreal foliage lasts however but a short time, as the scorching heat of summer soon shrivels it up and renders the trees scraggy looking. About a league beyond Viña we pass the spot where the highway to San Pedro branches off, before mentioned as a station on the Tucuman line, and distant nine leagues hence: we are now in the province of Tucuman and as we bowl along over

its flat wooded meadow lands, far removed from the mountains on the left, and sprinkled here and there with prosperous-looking estancias, the road, flanked by telegraph posts, lies before us straight as an arrow for leagues, traversing prairies of great extent, well stocked with cattle, but evidently subject to wet and which when the rains set in must be converted into endless swamp. To this succeeds a pleasing, undulating, well-wooded country with hedges of tuna, or flat-leaved *cactus*, yielding a wholesome and pleasant fruit, and then Cocha is reached, where we put up at a friend's of my fellow passenger, and dismissing the coaches to the patio and the horses to the potrero, sit down to what we consider a sumptuous *répast*. In the morning passing through its plaza, and by its telegraph station, few scattered shops and dwellings, we enter winding lanes bounded with the impenetrable and fantastic *opuntia* and arrive without incident at San José, where the scenery and vegetation, and even the style of the habitations impress as more tropical, whilst the natives bear the mark of damp, and excessive heat in that general wizened appearance so at variance with the comparative freshness presented by the denizens of the more southern provinces. Here a good view of the surrounding country is obtained as the road is elevated considerably above it and reveals well-cultivated and grazing lands luxuriant and of evident fertility, in the midst of which flows the Rio San José; to whose banks descending, we cross what now presents little more than a dry bed, but in the wet sea-

son becomes a torrent. This is the first of a numerous series of streams which travellers have to cross in journeying northwards, all tributaries on the right bank of the Rio Sali a triune river which, passing near the city of Tucuman, and pursuing a south east course, changes its name to the Rio Dulce where the Hondo enters it, and then flowing by the city of Santiago forms a delta further south and discharges its waters, now known by the name of the Saladillo, by several mouths into Lake Porongos. Upon this aquarius depends much of the future welfare of the province of Santiago, and with a jealous and apprehensive eye do the Santiagueños watch the increasing consumption of the waters of its upper course, due to the wonderful development of the sugar and rice culture in Tucuman.

In this district are found the Nogal (*Fuglans nigra*), Tipa (*Machaerium fertile*), two species of Ramos (*Cupania*), various species of Acacia, and Cedar &c.; and whilst all the trees are covered with epiphytes, especially the *Musci* and *Lichenes*; in some cases trees grow upon trees, the seed having effected a lodgement in some branch angle and finding there sufficient dust to cover its nakedness, has given way to its natural propensity and shot forth a stem. Two or three species of *Clematis*, several of the family *Convolvulaceæ* and the lovely Tripa de Fraile (*Canavalia gladiata*) adorn the path, and at length passing by plantations of cane we reach Invernada, where the first sugar-factory on Tucuman soil meets our view as it belches forth its

dense smoke and asthmatic steam; but not having time to examine more than its exterior, we push on for the River Marapa, which enriches the village of Graneros, and thence to a hamlet called Naranjo Esquina, a lovely little place pitched among pretty lanes and orange groves. A more open country of rich grazing land now presents itself, whereon herds of fat cattle are disporting, succeeded by bosquets and woods, the Sierras meanwhile accompanying us at some distance to the westward; and here the road branches, one fork heading for the mountains, the more direct route taken by our retinue, the other following the telegraph line, nearly in an opposite course, to the village of Medinas, which latter we in the first carriage erroneously [pursue, struck not alone with the natural richness of this district, as a grazing, agricultural and timber country, but with the animation everywhere observable. An industrious and numerous population evidently inhabits these parts; the road resounds with traffic, herds of fat cattle on their way to San Juan, troops of mules laden with valuable merchandise, with maize, cotton, sugar, tobacco, fruits, rice &c. reveal a land flowing with milk and honey, with regard to which, the negative enquiry as to what tropical produce Tucuman would not bear, seems more exhaustive and instructive than an investigation into its present yield. To detail all the numerous rivers we crossed in our progress to the city founded by Don Diego de Villaroel in 1564 would be tedious, but the chief merit notice as displaying on their

banks centres of activity: never indeed was there a region better watered, and in consequence never was there one more prolific.

The Rio Chico, which gives its name to the department as well as to the capital thereof, now confronts us; it rises amid the spurs of the Sierras of Aconquija and flows through a picturesque country, but its waters stop us not, and passing over into a beautifully rich open grass region, for the first time in this province, we have the satisfaction of espying some flocks of fine Merinos enjoying the succulent herbage. And here for some time we have been observing the sight, unusual in such a purely agricultural territory, of lofty chimneys vomiting thick smoke, indicating the locality of the important sugar factories at Medinas in our front, so urging forward we arrive almost at dusk at the outskirts of the village, where a shrill alarum smote our ears, as the whistles from the impatient engines summoned the busy workers to leave their daily task of squeezing, boiling and refining. We found the village a stirring little place, with a telegraph station, and enjoying considerable export trade in sugar, oranges, hides and tobacco: indeed there was no evidence of idleness here; men, women and children, all seemed profitably employed. The hamlet of Medinas somewhat resembles a rat trap; nothing more easy than to get in, but to get out again is attended with considerable difficulty. We had safely passed through it, taxing its resources to the extent of a solitary bottle of wine for our prospective evening meal, when we found

ourselves in the midst of an intricate system of dikes, several of which completely barred our progress, and into some we partly sank and could scarcely be delivered; in fact we were completely lost amongst the extensive irrigation and drainage works of these Netherlands. At last by dint of perpetual enquiry, emerging from the meshes of these transversals we coursed for a league or so over intensely green meadow land to the banks of the river Medinas, near which numerous swamps entail excessive labour upon the horses: indeed the whole of the province as yet traversed may be characterized as more or less oozy. Then as we plunged into the shallow but broad stream, its bed of quicksand clogged the wheels so effectually as to bring us completely to a standstill in the very centre of the river, with darkness falling around us; so after several ineffectual struggles to move, the owner of the cavalcade leaped into the water, unharnessed one of the horses and rode off for assistance, leaving me with the other resting in mid-ocean. For three mortal hours, enveloped in black night and in danger of engulfment and disappearance from this earthly scene, was I detained in that lonesome position like a feathered songster by birdlime, for ever blowing a powerful whistle, without which my late companion would never have been able to re-discover my latitude and longitude. At length the splash of advancing steps was heard, and then loomed up the party including an old man and a donkey, the sole result of my friend's lengthened search, which slender assistance however happily

sufficed to relieve us, after extraordinary exertions, from our bed of slime. We thus crossed what might not unaptly be termed a "Styx" and then sought for some rancho where to obtain food and shelter; about a mile from the river banks we chanced upon one, but with a cupboard so bare, that a few wretched batatas (sweet potatoes) were the only supply that could be obtained for our dinner; these we proceeded forthwith to cook in the embers and washing down the choking morsels with the wine of Medinas, famished retired to the coach and slept away our troubles.

Next morning turning our faces towards Concepcion, and passing through a flat and low, but tropical district, rendered picturesque by immense, vividly green plantations of sugar cane, rice and tobacco, and a distant view of the approaching mountains, the whole country strikes one as well populated and completely under cultivation, and our sight is again refreshed by the appearance of another large factory busily at work, and numerous signs of industry on all hands, a fact which, although common enough in Europe, is here noteworthy, as in many parts of the republic, the reverse is too frequently the case.

Every person met on the road has a piece of fresh cane in one hand, and a knife in the other, biped ruminants for ever chewing the sweet morsel as they go: sugar, in fact, in the neighbourhood of its production, whether in Salta, Tucuman or Santiago, really forms the principal food; adults and children are equally saccharphagists.

The hamlet of Concepcion soon reveals the glistening blanched towers of her church, and those delicious, incense-bearing orange groves, in whose midst nestle the abodes of her few but laborious inhabitants; we do not however linger to turn aside and enter the precincts of so immaculate a spot, but rather, pushing on, shortly after cross the Gastona, another of the multitudinous rivers of this fruitful province. Thence onwards, but a short distance intervenes 'ere we find ourselves on the banks of the Seco (Dry), the southern boundary of the department of Monteros, one of the most remarkable districts of Tucuman. In contrast to its name however, this river holds a considerable volume of water in its bed, and indeed during the rainy season, opposes serious difficulties to the traveller in the breadth, depth and swiftness of its current.

Our next goal is the considerable town of Monteros, in order to reach which, a river of the same name and the most considerable of all the affluents of the Sali, has to be passed. This river, rising in the neighbourhood of Tafí, the Chester of the River Plate, a lofty valley in the extreme north of the Aconquija range, in whose rich pastures cheese of surpassing excellence is produced, traverses the whole length of the deep hollow between Aconquija and the parallel ridge of Monteros. Once on the farther bank we revel in extensive orange groves, the perfume from which, in the month of September, is almost overpowering. We have now traversed the rich but, physically consi-

dered, somewhat monotonous plain which, as a land strait, or break between the chains of Ambato and Aconquija, connects those of Catamarca and Santiago del Estero, and forthwith enter a hilly region again formed by spurs thrown out laterally from the main cadenic array of Aconquija; and from the configuration of the land it appears highly probable that once this was an actual water strait, when what is now the province of Catamarca was resting quietly at the bottom of a great inland sea.

Of the picturesque and teeming department of Monteros, it is impossible to speak in too glowing colours. Forests of exceeding beauty, whose characteristic trees are the giant Myrtle-bloom, the Mato (*Eugenia mato*) with its luscious cherry-like drupe, and the magnificent Tipa (*Machærium fertile*) with its papilionaceous flower and alate fruit, whose straight stem rising mast-like without a branch for seventy feet, develops at the giddy height of double this, a dense crown of pinnate-leaved foliage; these and numerous other trunks are covered with Mosses, the *Pilotrichella*, *Meleoria* &c. and with Lichens, the *Cetraria*, *Sticta* &c. whilst the sward beneath lies clothed with the *Selaginella* and other Club-mosses, two or three species of *Panicum*, the *Digitaria marginata* and other *Gramineæ*. Such forests are interspersed with meadow lands of exceeding fertility, on which herds of fat cattle graze; cotton and indigo in addition to rice, sugar and tobacco are raised; the hills abound in precious metals; and the industries are manifold, numerous water-mills line the river bor-

ders, preparing the various valuable woods for the carpenter and cabinet-maker; whilst tanneries, sugar-factories and distilleries aid in giving employment to an assiduous and thriving race.

The town of Monteros, at which we now arrive, the second in the province in importance and population, has its Plaza, Church and Hotel, and rejoices in paved streets; considerable trade bustle is manifest from the export of its important products; but, as is the case in many other Argentine rural bergs, the females, as the survival of the fittest, are greatly in excess of the males.

In proceeding further northward a drive of a few leagues brings us to the river Aranillos, the boundary between the departments of Monteros and Famayllá, by crossing which and thus entering the latter district, we find it endowed with much the same physical character as Monteros, its landscape varied with forests, in which the woodman's axe is busy, mountain streams, and rich natural pastures; whilst the labours of the husbandman give birth to vast crops of maize, rice, sugar cane, wheat, tobacco, &c.

Pressed for time, we avoid the capital Famayllá, and hurry forward to the village of Lules, situated at the base of the mountains, on a river of the same name, which holds a course on the eastern side of the Sierras de Monteros, parallel to that of the river Monteros on its western flank. Lules, whose railway station on the North Central line lies some little distance off, seems to be a very busy hamlet, especially in the matter of sugar, a large

factory of which rears its chimney amid vapour and smoke: and after crossing its fertilizing stream, the country begins to bear much the same appearance as some parts of Ireland, parcelled into quadrilateral areas by ditches, with the boggy soil piled up beside; flat grassy lands almost impassable in wet weather, in which droves of fat pigs root and grunt for their subsistence, and on every patch a mud and thatched cabin with turfed sides.

And now heading in a more westerly direction for the mountains, we soon reach a place called the "Laureles," and never did a spot better deserve its name. Throughout the forests of Tucuman, the Laurel (*Nectandra porphyria*) is everywhere found in isolated specimens, but here it forms an extensive and formerly, dense forest, in whose recesses, numerous freebooters found, of yore, shelter and safe concealment. Imagine gigantic trunks, some of nine feet in diameter, jostling one another and rising perpendicularly seventy feet, crowned with an ample and elegant nimbus! beyond the mere grandeur and poetry of the scene, the centuries that those patriarchs have scored on their bark, what an inexhaustible store of commercial and medicinal wealth for future ages!

We were next bound for San Pablo, a delicious spot buried amid Banana orchards, Orange groves, Sugar plantations and factories, and backed up, on the west, by purple gauzy heights; and as the shades of evening were creeping over our cavalcade 'ere it drew up in the village, we entered a sugar establishment to seek shelter for the night.

Of all the busy scenes, in a small compass, I ever witnessed, none exceeded this in life and noisy activity. Facing the road stood the business offices and family dwelling, immediately behind, a spacious open courtyard consisting of at least two acres, and at the rear, the necessary workshops and mens' huts. Every available space in this vast patio was piled with stacks of freshly cut cane to the height of fifteen feet, and a considerable body of men and carts was employed to maintain the stacks at this normal level. In the centre were erected two trapiches, each containing a system of three vertical, hard, wooden cylinders working in contrary directions to crush the cane and liberate its saccharine contents. Each trapiche was driven by two pairs of horses, each pair working in yokes attached to the extremities of an enormous beam lever, much in the same way as clay is puddled in England for the manufacture of bricks; so that the two machines, completely independent the one of the other, had a combined effective driving power of eight horses, and ceased not their busy revolutions day or night during the harvest. On one side of the rollers stood men feeding the insatiable sweet toothed monster with fresh cane, whilst on the opposite, others received it deprived of its juice, as fast as the cylinders evolved it, and in this condition it was stacked to dry and afterwards employed for various purposes, such as fuel, thatching, the side walls of houses, or to strew on the circular orbit traversed by the quadrupedal motors. The expressed syrup is run by underground wooden

troughs into huge vats, and thence drawn off, as occasion requires, into copper boilers heated by subterranean furnaces, surmounted by lofty chimneys; and to cut, fetch and carry, and split up the enormous quantity of wood fuel necessary to feed these underground fires, affords constant employment to another considerable corps of men with their carts. The Chaco Indians, amongst them the Matacos, form the chief proportion of the labourers engaged on these multifarious operations, and these men think nothing of travelling thence on foot four or five hundred miles to seek work; and although the Matacos are said never to give way to hilarity, such a chattering, laughing, giggling community, I never before encountered.

The oppressive heat of the interior of the dwelling house, whither I had betaken myself to rest, and the tormenting mosquitos however soon combined to demand my exit from the premises, so throwing my weary body on the bare ground beneath one of the carriages, I endeavoured to woo without, the slumber denied within; but in vain, no peace was to be had that night, for a violent tropical storm quickly compelled me to vacate my hard bed and re-enter the house, but not to sleep. The never ceasing creaking of the lumbering wooden apparatus, the cries of the boy drivers as they lashed their whips, at times running by the horses' flanks, at others leaping on their backs circus-fashion, to urge the faltering animals to the utmost; the roar of the furnaces and the monkey like chattering laughter of the labouring army,

conspired to produce a Babel against which the most potent somnifer would have been unavailing.

Morning came at last and with it deliverance from the thralldom of discordant sound, and as we coursed along to pastures new in the pure and fresh air of dawn, and sought evidence of our approach to the capital, the object of our journey, with delight we viewed the hill slopes all covered with vivid green sugar plantations and factories from which emerged the white chimneys, peeping though the dense foliage.

But a short distance now separates us from the goal, to reach which naught remains, but to traverse a few leagues of humid turfy plain, dotted with plantations of tropical produce. We have maintained a course throughout to the westward of the railway, which cuts through the heart of the province, and have now arrived at its present extreme northern limit. Great efforts however are being made to extend its advantages to the isolated regions of Salta and Jujuy, but the works progress very slowly as, in spite of the abundance of forest timber, it has hitherto been found difficult to obtain an adequate supply of seasoned sleepers, and further, the engineers and navvies employed, hundreds of whom are on the sick list at a time, alike suffer from the attacks of the terrible Chuchu. It may be thought that this scourge of half the Republic lies within the control of medicine, and that an adequate supply of quinine would meet the difficulty; but although I personally have found the beneficial effects of its use, a

deep prejudice against this drug exists throughout the whole of the Upper Provinces; the pest-stricken inhabitants declare that its habitual employment not only rapidly destroys the coats of the stomach, but introduces other evils, and so with Hamlet, they

“ Rather bear those ills they have,
Than fly to others they know not of.”

CHAPTER XLII.

TRIP TO RIOJA, CATAMARCA AND TUCUMAN.

CONTENTS:—Review of the province of Tucuman—No home for the colonist—Sugar demand and supply—Cost and profits of a sugar establishment—English machine makers *versus* French—Superiority of Tucuman saccharum to all others except that of Misiones—Produce of cane—Mineral wealth—The Mamelucho no miner—Character of the Tucumanos—Goitre—Description of the city of Tucuman—The “*noli me tangere*” of the flower of Hymen—Line of earth fissures—Faulty administration of North Central line—Romay iron mines—The great Salinas converted into an illimitable Pacific—The Pacific transmuted into a Red Sea.

In reviewing the remarkable province of Tucuman, we may observe that all that previous writers have advanced with reference to its abundant fertility and wondrous picturesqueness is amply verified by the traveller of to-day; it is in fact one vast Park, clothed with an eternal verdure, the gift of its western wastershed which with loving tears for ever irrigates its grassy fold, especially a species of millet, the solid-turfed *Paspalum notatum*, which is the characteristic gramen of the whole region. Not alone so, but forests, woods, copses and scattered shrubs, with mountains and endless rivers, diversify the landscape equally with the labours of

man. For every species of cultivation, the natural advantages of soil and climate are perfect and no long time can elapse 'ere its whole surface will be covered with smiling farmsteads, and the plough and reaping hook drive the hoof to pastures new; indeed until such take place, until the land be drained, ploughed, tilled and the chuehu stifled, it must for ever remain incognita to the foreigner, whose chance of a tract in Tucuman is still further lessened by the fact that the whole of the soil is in the hands of private individuals and so no opportunity will probably ever be afforded of planting colonies in its midst, as has been so successfully accomplished in other provinces of the Republic.

All eyes are now directed hither as the chief sugar producing district of the future, and indeed in this enterprise there seems to be a boundless field for profitable investment, as the consumption (which is about 35 lbs. per head) must increase with the population and no diminution in the profits (at present quite 50 per cent. clear) can possibly occur at any rate until supply and demand become equalized, a period even yet very remote, considering that the annual consumption of the Republic is about 40,000 tons, and the yield scarcely more than a fourth of this.

To purchase a plantation of about a thousand acres, well-watered, and supplied with a factory having the best forms of apparatus and erections and provided with the most modern machinery, would probably entail an expenditure of twenty-

five thousand pounds, in which sum the machinery alone would figure for seven thousand; and from such an establishment, the handsome return of from 50 per cent. upwards on the outlay, according to management, might reasonably and certainly be expected. The custom however is now in vogue and increasing, to separate the factory business entirely from the plantation and purchase the cane from the small cultivators, as is done by the vintners in Mendoza with regard to grapes.

Of the twenty-seven factories already existing in Tucuman, and representing property of the value of upwards of a million sterling, many are fitted with the newest and most costly machinery, either English or French; but there is no doubt the French is ousting the English from the market, not from inferiority of workmanship or exorbitant cost, for the sugar-factors express a decided preference for English make, but probably for the same reason that Creusot rails both for tramways and railways are here so largely employed, namely, that English machine makers do not push their interests as they ought; and a similar remark might justly be made with regard to many other English interests in this country besides those of the machine makers and iron-masters.

As the industry is so profitable, it is developing with astonishing strides both here and in Santiago, Salta, Jujuy and Misiones; but the produce of the Tucuman plantations contains more saccharine matter and hence more sweetening power than that of any other district except Misiones, which exceeds

it in this respect by three per cent., and will probably maintain its supremacy. Any weight of cane, in a mill driven by steam, yields between the rollers 70 per cent. of that weight in juice, which again furnishes 18 per cent. of two classes of sugar, one crystallizable, the other not. The latter amounting to about $2\frac{1}{2}$ per cent. of the whole weight of the sugar yield, is only fit for the manufacture of caña (white rum); so that one ton of cane produces only 225 lbs. of marketable sugar.

Last year the output from the province of Tucuman was 9,000 tons: this year, in spite of the havoc committed by frosts, the crop is expected to reach 11,000: but great difficulty is experienced, not in finding a market for its various produce, but in transporting it thither; the paltry Liliputian, narrow guage, toy line, that connects Córdoba with Tucuman, if perfectly inadequate to the present traffic, will certainly collapse from congestion when extended further north. Its sheds even now are always in a state of plethora bordering on apoplexy, blocked up by ever accumulating mountains of sugar, spirits of wine, leather, hides and wool, whose rate of progress downwards scarcely equals that of the boulders in the glacial period.

But yet another fountain of wealth awaits development; the mountains of Tucuman are rich in alabaster and plaster of Paris, in gold, silver, copper, lead and tin; but although of the royal race that people the plains, the Mamelucho (Gaucha), like his brother of the South, disdains any other labour than the bucolic, the majority are quite

alive to the advantages within their reach, and when sugar has been pushed to its utmost limit, and profits begin to pale, will then no doubt turn their attention to the exploitation of mineral wealth.

The Tucumanos generally, in common with the Santiagueños, are descended from the blood of the Calchaqui and Lules Indians (tribes of the Quichua family), mingled with that of their Spanish conquerors; an hospitable, amiable, brave and assiduous people, with an eager desire for improvement and a keen appreciation of European civilization; with whom music, dancing and poetry are a passion and the harp the favourite instrument; and were it not for the endemic ague which cloaks the land as a funeral pall, and in a less degree the goître* or metallic-earth indicator, from which half-per-cent of the natives suffer, this blooming Eden would attract to its smiling acres not, as at present, a mere mantissa of settlers, but a vast swarm, so as to render the province one huge hive of industry: as it is however, this the smallest of the Argentine scions, but with a population relatively the densest, already shoots forth blossoms in the vanguard and launches forecasts of a future of intense productiveness, so soon as the period of its maturity dawns.

* The northern states of the Argentine Republic seem to me a very favourable zone in which to study the origin of goitre, from the ease with which the superficial rocks and their metalliferous contents are determined: one fact however is sufficiently patent, that in those districts where the disease is most severe, limestone does not occur.

The city of Tucuman, the only important town in fact in the province, was transferred to its present site in the year 1585, having been founded a few years before at the confluence of the rivers Sali and Monteros. Frequent inundations however rendered its former position untenable, and as in the case of other provincial capitals, the mistake of its founder was atoned only after much loss and suffering, by seeking a higher level and a greater distance from the violent watery flux. Lying in Lat. 26° 50' S. and Long. 65° 17' W., about a mile from the banks of the Sali, and 30 feet above its current, on an elevated plateau 1,300 feet over sea level, the present city is looked upon with respect by all Argentines, as at once the theatre of the last crushing defeat of the Spanish arms by Belgrano in 1812, and the cradle of the independence of their country. To commemorate the former achievement, a monument has been erected in its environs, and to render historic the latter, the premises in which the act of Independence was signed in 1816, have lately been purchased by the nation.

Tucuman, which is without doubt the most industrious and flourishing town in the northern parts of the Confederation, has 25,000 inhabitants, is well built of excellent native materials, bricks, marble and wood, and laid out in the usual chequered form. The houses, consisting chiefly of ground floor alone with azotea roof, possess extensive interior patios paved in marble mosaic and filled with rare plants which shed a precious fragrance around. The marble so extensively used in constructive decora-

tion is obtained from the neighbouring sierras, and the wood, much of which is cedar, from the adjacent magnificent forests. Of the pavement by renal petrefactions, little can be said that is commendatory and of the nocturnal illumination by kerosene even less, both are still in a somewhat primitive state. The public buildings impress neither by their beauty nor number: the Cabildo, Cathedral, National and Normal colleges and several miserable-looking churches, pretty well complete the list; the two former of which stand, as is usual, in the public Plaza. The imposing and massive Matriz (Parish church), with cupola, towers, Doric façade and abundant internal decoration, was the work of a French architect, over whose name, as in so many like cases of temple building, "the iniquity of oblivion hath blindly scattered her poppy"; but several other semi-public structures add somewhat of adornment to the city and neighbourhood, comprising the monument at Ciudadela, the elegant wooden bridge over the Salí, erected to replace those previous structures so many times swept away by the floods, a railway station with fine exterior, to which the dirty and ill-regulated interior does not correspond, a very common failing in Argentine construction, in which internal commodiousness and elegance are often sacrificed to a lavish outside show; a theatre, two banks, three hotels, the chief of which, the Colon, in the Plaza, has a fine large café, well adorned with paintings and supplied with three billiard tables, where nightly a numerous concourse of the élite gathers to while

away the time in billiards, dominoes, chess, cards &c.: but generally though provided with spacious comedores (dining rooms), these inns offer very inferior sleeping accommodation, as well as bad service; three breweries, and lastly a like number of markets. The delightful central Plaza, planted with orange trees and flowering shrubs, and provided with marble seats, a central fountain, and kiosks, contains many fine shops and is altogether a very lively rendezvous, especially on the three evenings per week when the military band plays, the attractive strains of which suffice to attract hither in crowds those dark beauties whose lustrous lesser orbs unceasingly flash the fire drawn from the greater, to bewitch their willing captives; but as they outnumber the rougher sex by nearly forty per cent., the priviledges of leap year are not disregarded in Tucuman. Calle Bolivar which, like High-Street in England, is found in almost every town of South America, forms the principal thoroughfare for lounging, promenading and shopping; its stores are numerous, elegant and well-stocked, and the fine new market, an honour to the city, there daily offers housekeepers an abundant supply of all kinds of food: a widespread system of hawking however obtains, and numbers of women flock every morning, especially to the hotels, bearing in baskets a heavy and promiscuous load of boots, fowls, ponchos, rugs, sweet lemons, lace and other millinery, and with all the pertinacity of mendicants or Israelites seek to drive hard bargains; nevertheless, as yet, the peripatetic

merchants of Tucuman have not succeeded in raising those piercing street-cries, from which the nervous Porteños suffer such excruciating agony.

One great need, that remains as yet to be supplied, and is sorely felt especially by travellers is adequate Public Baths: as the present wretchedly appointed substitutes do not meet the necessity and are not patronized; to be deprived of so indispensable an accessory during the sweltering weather of my sojourn there, was bad enough, but when in addition the twin necessity Ice failed, my troubles culminated and existence appeared scarcely supportable; the machine was out of order, and the frozen water had to be imported from Córdoba, in insignificant quantity and at exorbitant rates.

The environs of the city are occupied by plantations of sugar-cane with their factories, all surrounded by ditches and hedges of *Opuntia*, besides a mass of other vegetation comprising tobacco, rice, maize, lucerne, and all kinds of fruits. Leagues of woods there are too, composed of little else than vast orangeries with their dark evergreen foliage meeting overhead as a canopy and through which the sun never peeps, their golden apples and olive-coloured clean stems, to which no parasite ever dares to cling, and carpeted beneath with a thick verdant sward, where to roam is enchanting, above all when the air is oppressed with the perfume of this flower of Hymen. Indeed Tucuman, with its natural and artificial delights, tempts the wayfarer to tarry in her midst, as there is scarcely a physical want but

what may there be supplied; whilst in addition to the comfortable and picturesque dwellings, telegraphic and postal communication exist to all parts, and the railway affords a ready means of visiting the littoral, a tramway is in process of construction, and water and gas works projected: but, on the other hand, numerous stagnant canals and marshes, the deadly gift of the Rio Salí, and than which Jupiter's present to Pandora was scarcely less fatal, envelop the spot in malaria, and render Chuchú peculiarly endemic. The city is likewise situated on the line of earth fissures, as was proved in 1844 when an earthquake pretty well shook the senses out of the people; this line is facile to trace in the Republic, and hitherto has been by no means correctly delineated by Physical Geographers.

Tucuman can now be reached from Buenos Aires, distant about 900 miles, in three days and nights, by steamboat and railway, but the journey becomes laborious when prosecuted at such a rate; the worst part of the excursion is undoubtedly the last, on the North Central line, which is deficient in conveniences of every kind; not a drop of water for instance is to be had en route on the train, although the heat may be excessive and the dust terrific, so different this from the treatment on the Central Argentine, where every carriage is fitted with a cistern; and even at some of the stations, the liquid is so brackish as to be almost undrinkable; and the passage is likewise further rendered needlessly tedious by the many long stoppages, which are vexatious to all but the troops of

hungry cadaverous looking curs which infest the stations for the purpose of obtaining a dishonest but scanty livelihood by licking the grease off the axle pans of the carriages and waggons. The administration of this railway indeed leaves room for much improvement, by the introduction of night trains, day express trains and the maintenance of either correct local or a uniform time throughout, as at present no two stations keep the same, notwithstanding the presence of an observatory in Córdoba; and moreover, it is the duty of the authorities to insist that attention and civility to passengers should form the great and characteristic dialogue of the guard service, old fashioned normal features as yet completely ignored by the modern Knights of the whistle on the Government line to Tucuman.

On the return journey by rail from Tucuman to Córdoba, the Rómulo iron mines in the neighbourhood of Frias station seemed to have imbibed fresh life-blood from a government subsidy, which has lately placed at their disposal a sum of £20,000; in fact, in this country few native interests think of standing independently without seeking executive support: and as we proceeded in our downward course towards the littoral, my attention was strongly arrested by the sight of the great Salinas, through which the line cuts, and which in general are nothing but one vast dead-level plain of glistening sand and salt reflecting a blistering heat; this time however to my astonishment, I found them covered for a hundred leagues

or more with water, presenting the appearance of an illimitable Pacific, so much so indeed, that some simple minded native travellers, not very strong in Geography, actually ventured the inquiry as to whether we had not reached that peaceful ocean. This fluid cap however, though looking so tranquil to-day, and of insignificant depth, possessed power enough if urged by a strong westerly breeze to carry away the railway bodily. Presently my thoughts were riveted to discover the meaning of extensive coral-like reefs appearing in the distance in the midst of this watery plain; and as we neared the object of my anxiety, great was my surprise to find them consist of patches of closely packed Red Flamingos which, standing in hundreds of thousands in their usually solemn attitude, motionless in the water, changing the character of the Pacific into that of a Red Sea.

CHAPTER XLIII.

1,200 MILES UNDER CANVAS.

CONTENTS:—Camping out—1200 miles on mule-back—The bare earth the best bedstead—A plague of thorns—Thirty leagues in a bullock cart—An Englishman dropped on the Sierras—Chilian deserters—A search for mules—The home of the *Sparganura sappho*—A disreputable museum—A population injected with alcohol—Bucephalus—Peons and their failings—Loading mules—London-made trunks—Warlike equipment—Trouble with cargo mules—Palo borracho—Fifteen crossings of the Rio Ambato—A mercenary Abigail—Flocks of *Conurus patachonicus*—The cur "Malgenio"—An army of barking foxes—Germans scent the money bags—A tax of six condor heads—Difference of night and day temperatures—The cargo "en sprawl"—A blast of the Zonda—A drove of fifty wild swine—Porcine miscarriage—A mountain-top enveloped in flames—Two bare escapes from immolation—A gradation of moisture—A ruin of the time of the Incas—A roadside orgy—Surly mestizos—The complaint of a drunkard—We scale the Quichua ruins—A description of an ancient Indian fortress—An ancient mestiza—A sackful of fresh bread—An extensive panorama at a sickening depth—An intensely wicked gratification—Lost in the desert by night—Within view of Andalgala.

Hitherto I had prosecuted all my land journeys with the aid of such travelling facilities as the country affords, its steamers, railways, diligences, carts, and hotels, but now my determination was taken to enter upon a thorough camping out trip, independent of all artificial assistance, in order to harden my frame for further adventures. Accordingly it became necessary to provide myself and an assistant fresh from London, with a suitable

outfit for a journey which, starting from Catamarca northwards to the utmost limits of the Republic, involved 1,200 miles' travelling on mule-back, over a territory little known and full of dangers, hardships and difficulties. In such a case one of the chief perplexities arises from the necessity of choosing only such things as are absolutely indispensable such as tent, blankets, rugs, clothing, cooking utensils, apparatus, tools, guns and ammunition, and having secured these, which weighed upwards of 400 lbs., in a moment of weakness we added a feather pillow apiece, to break the camel's back. Anything approaching a bedstead was eschewed, being satisfied from previous experience, that lying on the ground, on a waterproof cloth, is at once the most comfortable and least cumbersome, as well as least troublesome method.

On arriving at Rosario then, in order to commence our life of hardship we erected our tent in the station grounds and slept there; at Córdoba the manager of the Central Argentine Railway courteously put a sleeping car at our disposal, in which we passed the night too luxuriously; and on reaching San Pedro, a station on the Tucuman line, proceeded to pitch our canvas about 300 yards therefrom, and literally in the wilderness. The station master, thanks to the instructions of the government line inspector, in whose company we travelled, gave us the use of the station trolley to transport our luggage to its destination, where we awaited the advent of a troop of carts to start in two days thence to Catamarca.

This San Pedro, which lies in the province of Santiago del Estero, is the chief town of the district and from which a branch line is projected to its capital. It contains perhaps twenty brick houses, the rest are merely mud ranchos, and the population is chiefly Indian, intermingled with a few foreigners.

Owing to the difficulty of securing the mules, which were grazing some leagues off, and the general dilatoriness of people in this country, the two days' grace became four; and as the nipping pampero was blowing strongly the whole time, driving clouds of fine dust in upon us, although the tent, one of Edgington's, was almost hermetically sealed and stood to its pegs right well; and the nights were awfully cold being midwinter; and every inch of the ground covered with almost invisible yet very sharp needle-like spines dropped by a weed that usurps the desert; the delay was by no means relished. It requires however but a short residence in this republic to tone down the impatience which an Englishman, especially one newly arrived, naturally feels at the universal crastination that reigns supreme, above all, in the rural parts of a land which in one sense has no present.

The thorns proved at last unbearable; they swarmed and penetrated everywhere, blankets and rugs afforded but little protection, nothing could be put on the ground, scarcely anything touched, our persons were pincushioned to the utmost limit of endurance, so that spinose torments combined with the loss of four days, in which we had been unable

to direct attention to the fauna of the region, rendered our tempers none of the sweetest.

At last on a Sunday morning, we were summoned to the station, as the caravan was ready, and after a very particular weighing of our luggage, we started for Catamarca, a distance of 30 leagues, and as this was my first experience of a bullockcart, I hope it may be my last.

The journey was terrible; so slow, jolting and cold especially at night, which added to execrable food and little water and that little bad, made us almost repent thus early of our design to rough it. When however half the distance had been completed and the Sierras of Totoral reached, I determined to disembark my assistant at a rancho near the summit and consign him to the care of the capataz of the estancia there, and having given strict injunctions to take care of him, as he was fresh from London and spoke not a word of Spanish, I hoped that, during my absence, he would be able to collect on that chain which struck me as rich in specimens. My object was to push on to Catamarca to transact business, buy mules, engage a guide and on my return to pick up the wail and proceed forward to Andalgala, a rich mountainous mining district lying on the north of the province: but the excursion lasting six days, became at length so wearisome that I walked long distances daily by the side of the carts, and at last, on nearing our destination impatiently leaped down and strode on through deep sand the remaining three leagues, arriving in Catamarca with sore and

swollen feet which almost disabled me for some days after.

Notwithstanding Catamarca is a breeding ground, I found mules extraordinarily scarce and dear there, on account of the dearth of fodder, indeed they were dying off rapidly; a famine threatened man likewise, as flour was already selling at 6*d.* a lb. and very little of it, although new wheat was in the market, but useless as yet for food. As the mules were few, so were the muleteers, and freights were in consequence doubled to the imminent extinction of all local commerce: many deserters however from the Chilian army, tempted by the offer of £6 for their rifles and daily rations, were found in these parts ready to do duty as *arrieros*. Two friends and myself therefore set out on horseback one morning to a small village three leagues distant, and after breakfasting with an acquaintance there, proceeded to beat up the neighbourhood by calling at every house. We inspected a considerable number but a long price was asked in every case, and after much haggling I agreed to take four at 29 Bolivian dollars (£4 10*s.*) each, which number had subsequently to be increased to five, as 300 lbs. is the limit for a mule load and my impedimenta weighed upwards of 400. I determined to try the animals just bought by a preliminary expedition, and so next morning started at 7 a.m. from Catamarca, accompanied by a peon, to fetch my companion from the Sierras of Totoral, and by trotting all day accomplished the distance of eighteen leagues by 8

p.m., finding the mules simply perfection, willing and tame and with such an easy seat. My assistant was all right and had employed himself as I anticipated, but experienced a very stormy time of it on that exposed station, where after waiting a day for the purpose of collecting, we set off on our return to Catamarca, but were only able to proceed very slowly as the luggage was not evenly balanced on the mules, and at last a halt became necessary to unpack and repack the heavy cases. Half the distance therefore was all that could be accomplished on the first day, but this was the less to be regretted as the Rector of the National College had kindly furnished me with a letter to the capataz of his estancia, where we spent a very pleasant night in clover, having a splendid dinner and occupying the best bedroom; and by the evening of the following day we were safely housed in the city.

The next morning sallying out with a fowling piece, I luckily hit upon the very ground of that magnificent Humming-bird the *Sparganura sappho*, four of whose tails flashed no more; two others of a different species and more sober dress (*Chlorostilbon*) were likewise bagged, and many visitors came in the afternoon to see us working at the specimens. I was now anxious to begin moving northwards, but was detained first by the Rector who asked me as a particular favour to arrange their museum, which for a long time had been in a most disreputable state, and it took two of us a week to accomplish the Augean task; and then, on account of the independence of the lower class, it was found next

to impossible to obtain a peon to accompany us, to act as muleteer, guide and cook. Some of these fellows would come and engage themselves, receiving as is customary an earnest of perhaps four reals (2s.), which they forthwith proceeded to invest in drink, and no more was seen of them; others would enter the presence in a state of actual intoxication, only to be at once dismissed: both in Catamarca and Santiago the whole of the lower order of the population is injected with alcohol even to the capillaries and mummied while living, and yet one redeeming point is that they are never quarrelsome nor dangerous in their cups as are the gauchos of Buenos Aires, but simply irremediably stupid, which is trying enough to the temper of those who engage them. Finally, by dint of great exertions, and the payment of fourteen Bolivians (£2 7s.), a month with food, I succeeded in obtaining a very good man, that is one that knew his duty well, but who of course would drink to excess on the very first opportunity. Another animal had now to be provided and in default of a mule, I chanced upon a strapping horse with the neck and chest of *Bucephalus*, which was at once secured, and now all was in readiness for departure.

On the day of our start on the nomadic journey of 1,200 miles on muleback, throughout which we had to sleep in the open air, the mules were to be at the door at 2 p.m., and so they were, but with a tipsy peon, whose customary parting stirrup-cup had been so potent as to cause us the loss of a couple of hours in loading the two cargo animals,

which stood quietly with their packsaddles of straw and sacking, awaiting the apparatus, clothes, guns, and ammunition, pots, pans, provisions, barrels one for wine the other for water, tent and poles, broom to keep our house clean, and various other articles, amounting by a late augment to quite 300 lbs. each. Now in loading mules for a rough mountainous journey, no easy matter, if the weights are not equally adjusted, or if the packages are not elastic, all goes wrong; in our case, four large London-made trunks rendered the cargo unmanageable, it would not settle, and caused endless trouble in continual rearrangement. The natives use petacas (hide envelopes) which are invaluable, inasmuch as they stand any amount of battering, whilst wooden or tin boxes, no matter how strong, soon suffer a more or less complete analysis, as the mules go swinging along and banging the cargo against rocks and trees.

The saddle mules, of which I rode the smaller and my assistant the other, were not in good condition, although they had been out at pasture for the previous fortnight, but Bucephalus, which the peon bestrode, was as frisky as his namesake of old; and all the animals were well shod, a thing unheard of in the plains, to fit them for the rugged hilly tracks in store for them. We thus debouched from Catamarca, not without some apprehension of the dreaded Chuchu (ague) which attacks travellers indiscriminately in these upper provinces. but well armed and provisioned; I carrying a rifle strapped to the saddle, a revolver and dangerous

looking knife, my companion a double-barrelled gun, revolver and equally threatening blade, and the peon his huge facon; warlike precautions unnecessary in this province, but as we had to act as our own policemen farther north, it was thought better to assume from the first an attitude that would secure respect even from the most daring and lawless; and for further security at night, a watchdog was added to the equipment.

Every now and then a halt was called to trim the cargo, but pushing on slowly through the charming and well populated suburb of Chacarita, with its pretty lanes, orchards, meadows and vineyards, we cross the bed a river, now dry, but which becomes a rushing impassable torrent when rain occurs, in whose deep sand our animals flounder; and at 8 p.m. on reaching San Antonio, a village only two leagues from Catamarca, we dismount to rest for the night. Our first object was to seek pasture for the mules, which was at length found, after repeated enquiries at various dwellings; unloading then and sending off the peon with the animals to the potrero (enclosed alfalfa field), our tent soon shot up, and after a hurried cold meat dinner, in a state of exhaustion we threw ourselves upon the ground amid a heap of saddle cloths and were immediately buried in slumber.

Astir at daybreak and saddling up, we started off a little after sunrise to a village called Piedra Blanca, five leagues from Catamarca, in fact the usual fashionable afternoon drive for the upper classes of that city, and where there is a handsome

casino or hotel; having still much trouble with our cargo mules throughout the day, which however we soon forgot on reaching the next resting place Pomancillo, a site that delighted us with its picturesqueness. Here we entered upon a winding quebrada or ravine some leagues in extent, through pretty woods forming avenues whose foliage met overhead, disclosing telescopic views of ravishing interest; then high banks and hedges through openings in which were viewed peaceful scenes of agricultural life, crops, meadows, hedges, rows of poplars and Derbyshire stone walls, backed up by hills rising in stages and to crown all, the gentle breeze came laden with the aroma of the scented flowering mimosa. Continually, in our advance from this point, we were confronted by the barrel-shaped tree, the Palo Borracho (*Chorisia insignis*) which, at this season of the year, winter, denuded of leaves throughout, resembles in its nakedness the tun of Bacchus, and from the crest of whose egg-shaped stem shoot out horizontally a few stout boughs tapering rapidly almost to a point and covered with thickset blunt and short rounded spines, presenting a great contrast between the dark hue of the trunk and branches, and the snow-white spheroidal seed pods that line the twigs. Some specimens exhausted with flowering have already turned to seed, whilst others are still clothed with the gaudy purple bell-shaped corolla which in Catamarca formed the favourite resort of the long-beaked Humming-birds in their search for food; indeed this remarkable *Bombax* sheds its influence over the land-

seape even in winter, and coats with its hoary down every bush and tree in its vicinity, as the winds, which here prevail during two of the hyemal months, sweep along the silken flocky balloons with their aeronautic seed. We now crossed the Rio Ambato, a name likely to be stereotyped on our memories, as we had this day to traverse it fifteen times; it is a tortuous mountain stream, presenting in summer an impassable torrent, but now fordable, although deep in some places, with a rough bottom of stones and boulders; and 'ere we had passed over its bed for the last time and reached the Puerta, our haven for the night, darkness overtook us, and not being able to distinguish the path, by giving the reins to the mules we reached our destination without any other mishap than sundry scratches from prickly shrubs which our steeds took no pains to avoid. The first object was to seek pasture for the mules, all the more necessary to be thought of in a district where there exists not even a blade of indigenous grass, so as the scintillating lights revealed habitations and when the chorus of noisy dogs allowed us to be heard, our clamorous petitions rose on the gloomy air, but met with no response, save that to move on. We were told that it would be necessary to cross this tiresome river yet again to find potreros, and so in the midst of blinding night, in a part where we were complete strangers, exhausted in mind and body, we wearily turned our heads in the direction indicated and luckily succeeded in finding the very gate, where knocks and shouts, plentifully interspersed with

Ave Marias were of no avail, until when just on the point of retiring, an old woman popped out her head who, in the absence of the capataz, declined to do anything for us. As we could not get fodder for the animals that night, our intention was to lose a day by giving the mules a rest and feed the whole of the morrow; we then asked permission to encamp in the corral, but even to this the mercenary wretch would not consent without a consideration. Just as the unpacking was concluded by the sense of touch alone, up rode a man saying he heard we were in quest of pasture, that he had plenty, but would charge heavily for it; so the peon was despatched with the string of hungry quadrupeds and we were fortunately saved the contemplated sacrifice of time. Our tent was soon pitched in the corral (cattle yard) and a fire blazing, whilst a racy asado spluttering forth its savoury odour promised a feast which, with wine and biscuit, rendered happy and hushed to sleep like tops the exhausted travellers, who had been in the saddle all day from 7 a.m. to 9 p.m. with the exception of one hour for breakfast.

Next morning by dint of getting to work before daybreak, we were enabled to start soon after sunrise, and crossing the river gained the main road, shortly entering the straggling village of Puerta (doorway), so called as the valley here narrows to open out again further on, on passing through which we met with several stout Italian immigrants who, evidently thriving and making money here, expressed themselves as perfectly well satis-

fied with their lot. This highway now winds along the vale, now ascends the hills skirting it, revealing at our feet a basin of about a mile in width, covered with vineyards, alfalfares, cultivated lands, and orchards sown thickly with the delicate pink and white blossoms of the peach and pear, whilst rows of poplars, stone walls, or various prickly shrubs mantled with creepers, divide the different inheritances, in the midst of which, to my surprise, are dotted here and there stone dwellings. Meandering through the dale courses the swift-running though shallow stream, dashing in foam against the boulders which form its bed, and from the opposite side of the valley rise mountains tier upon tier. As usual, especially in climbing, the baggage, by getting continually displaced, caused us much trouble and loss of time, but pushing on, as the valley widens, the stream diminishes, and at last we make its channel our path, passing by perpendicular cliffs worn away by the immense force of the current when swollen by the summer rains, and on whose face lie exposed ferruginous clay and thick strata of shingle, honeycombed in every direction by the Barranca Parrot (*Conurus patachonicus*), flocks of which greet us at this spot with their discordant cries. Hitherto we had been much diverted with the vagaries of a wretched looking mongrel, which the peon brought with him for our protection; that was a dog of character! so meagre and loose-skinned however was he, that it was a wonder he did not drop to pieces, yet of sufficient sagacity invariably to shut his mouth when

the wind arose, in order to prevent his membranous envelop from being blown clean away. To extol the virtues, especially the bravery, of this cur, was the never failing theme of Don Neoptólemo, whilst he saluted every stranger with the somewhat unnecessary precaution “¡Cuidado con el perro!” (Beware of the dog!). “Mal génio” (Bad character) he called him, but we “Lazybones,” as on every possible occasion, like Joe in Pickwick, he fell asleep without the least provocation. Did a halt even of the most trifling description occur? an event for which he was perpetually hazarding forecasts, down dropped the canine into instant slumber, 'ere the hoofs had yet ceased to beat the earth. Trodden on by mules and kicked by men, Lazybones did not allow such trifles to incommode him nor interfere in the least with his exertions for self-indulgence, and on this day, whilst crossing the river at a ford about a foot deep, but with a swift running stream, we stopped to give the mules a hasty drink, and as some of them had passed over and the rest just reached the bank, leaving Mal génio in mid-channel, the dog sniffing an opportunity for his favourite gratification, forthwith closed his eyes and dropped for a nap, but the current was too impetuous and bore him away, a discomfiture at which we laughed heartily; he heard us! but deaf to ridicule as to flattery, for once putting forth considerable exertion, he swam to a neighbouring spot only just covered by water, and not to be balked of his snooze, there quietly sank to a rest from which we did not disturb him.

The route along the dry river bed was at length forsaken, but our progress had been so slow that we were unable to reach our destination Singuil that night, and had to remain at a place called Pucarilla, where the tent was soon erected in a corral adjoining the house of a man who engaged to give the mules a feed of green barley, which is frequently sown along with alfalfa and coming up first is cut for fodder.

The next morning, as there was a moon, we rose at three, with the foxes barking around us but not visible, and replenishing the still glowing embers of our previous night's fire, enjoyed a cup of cocoa and a little bread, and then set to work packing, a two hours' job, and just before daybreak, the air being extremely raw, started for Singuil, distant three leagues. When nearing our goal, the landscape suddenly underwent a complete change, disclosing now undulating pampas covered with coarse grass, which at this season of early spring, assumes a yellowish brown hue; on each side, about a league off, appeared dome-shaped mountains covered to their summits with the same rough garb, but no trees save such straggling individuals as were barely kept alive in the gullies by the trickling moisture; and travelling thus at an elevation of about 3000 feet above sea-level, we observed no other indications of vegetation except *Cacti*.

Just before our arrival at Singuil, two affluents of the Rio Grande had to be crossed which, uniting their volumes only a few yards below, form the main river that, bending its course N.W.

through a mountain gorge, debouches into the province of Tucuman; and on the other side passing some immense potreros enclosed by stone walls, the property chiefly of the family of Molina of Catamarca, and a few scattered houses comprehending the village, we pull up in front of the store and mill belonging to Don Teodoro Busch, a German gentleman settled here for the last seven years, and to whom I bore a letter of introduction: indeed, in whatsoever direction my wanderings have led me in this republic, I have always found Germans cropping up, wherever there is a chance of making money; and not alone are they enterprising on their own account, but very attentive to travellers. The host was from home inspecting his potreros, nevertheless we dismounted at the door to await his arrival beneath the shade of some magnificent willows, and in the course of half an hour he put in an appearance on horseback and gave us a hearty welcome. Our intention was to rest but a short time in Singuil and then press forward to our next halting place six leagues over the mountains, but in that case most probably, at the rate we were proceeding, night would overtake us on the top of the sierras, where there was no shelter, no provender save a wiry pampa grass, and no firewood, and moreover the appearance of the weather betokened a snow storm, so that we were not very loath to yield to the entreaties of Señor Busch to remain the day and night under his hospitable roof, and thereupon unloaded and sent the animals off to one of his alfalfa fields. In course of conversation

with our host he remarked upon the immense number of condors on the sierras around Singuil, and the dreadful havoc they commit amongst the cattle-breeders' stock, notwithstanding the law obliging each estanciero to present annually six condor heads to the justice of the peace, a regulation that reminded me of mediæval times; indeed there is much in the habits, mode of life, and sentiments of the people of this far interior, to cause the thoughts to revert to those distant ages; however, in spite of the wholesale destruction effected by poison and the war of extermination waged against them, the Sarcorhamphi have as yet by far the best of the argument.

The day was spent pleasantly enough, far too pleasantly indeed, among the German Lares; two or three plentiful meals, interspersed with lengthy siestas in foliaceous bowers, enchanted us, and the cosy post-prandial chat with Don Teodoro was no sooner ended than comfortable beds awaited us, which we were very averse to quit the following morning at 3 a.m. the hour fixed upon to resume our journey. How bitterly cold that matin was, when by the pale light of a waning moon we packed and saddled and finally started at 5 a.m. with fingers so numbed as to be incapable of holding the bridle! Throughout the republic it is the great difference between the temperatures when the sun is above or below the horizon, that becomes so trying to night-wanderers.

Our route lay along the bed of the river, which every now and again had to be crossed, and I no-

ticed that the different species of *Cacti*, *Opuntia ferox*, *O. coccinellifera* and those of the *Cereus*, which had accompanied us faithfully and closely hitherto, now loathfully bid us a short farewell as we neared the mountains, only to rejoin our cavalcade on the other side. As it required good eyesight, when aided by subdued moonlight alone, to follow the track which crossed the river so constantly, the peon led the way, I was in the middle driving one pack mule, and my assistant behind coaching another, when all at once down came the latter full sprawl with all the valuable part of our baggage; the cargo had become displaced unknown to us and the mule was rendered helpless: the accident was mortifying enough, inasmuch as it was the result of carelessness, and all hands had to dismount and repack the prostrate beast. Soon after passing the fine estancia belonging to General Navarro, the sun began to yield tokens of his near approach and no one but the traveller who has emerged from a warm bed soon after midnight to combat the raw air for leagues on horseback, can understand with what delight we hailed the advent of the Incas' god "who still lives in the heavens and looks down upon his children."

Two leagues from Singuil enabled us to reach the ascent which on the hither side of the range presents an herbage of coarse dry grass sprinkled with a loose stony debris; and gazing upward, a winding narrow thread discloses the track along which we traversed the evenly curved mountain domes from summit to summit, as they lay gently

rising the one behind the other, occasionally crossing rugged narrow gorges into which it was necessary to descend as they intersected our path transversely. Soon after commencing to climb the acclivity I was intensely surprised by a sudden blast of my old enemy the Zonda, whose baneful acquaintance I had contracted in San Juan, true it was here shorn of much of its force and virulence, but was sufficiently hot and oppressive especially to those numbed with cold as we were. Through the second straitened defile, only a few yards wide, coursed a lovely rill of clear running water, nestling in the midst of shrubs and dwarfed trees, and emptying by a miniature waterfall into a beauteous deep crystal basin with rocky precipitous sides, which tempted the dusty nomads to a plunge: and as the packs had again become displaced in the severe descent, here we lingered fondly until the stentorian voice of the arriero summoned us to remount and pursue the journey which, ever ascending, caused the cargo ceaselessly to shift, so that every few minutes we had to dismount and arrange the burdens, an employment that sadly distracted our attention from a landscape which grew every moment in beauty.

Laboriously working our way upwards, suddenly we were startled by a chorus of grunts directly in front, and forthwith issued from amid the thick pasture and almost beneath our feet a drove of at least fifty swine, whilst several of the sows were accompanied by litters. Then urged by a glowing vision of roast pork, I quickly turned to the muleteer and, as the herd was already dashing full tilt

down hill, demanded to whom they belonged. Now as our guide was a very timid fellow and funky above all for his wide-awake and brave "Mal génio" he replied "I don't know" and then afterwards added that "they were a breed of wild pigs descendants of some tame ones that had escaped to the mountains, but very fierce and dangerous to attack." Whereupon we immediately jumped off our mules and seizing the guns set off in pursuit, but as the porkers were now so far off and invisible in the lofty grass, fearful of delay, we soon returned empty-handed, but bursting with indignation. The nincompoop afterwards confessed that he was alarmed not alone for himself and his dog, but lest the half-Indian people in the valley of Pucará, whither we were tending, and who bear a very bad reputation for extortion, should see us cooking the sucking pigs and lay claim to be paid for them. We afterwards heard that the existence of this wild herd was well known, and as their flesh was very highly esteemed, hunting parties were frequently organised for their chase, though with but little success. Not only did our dolt deprive us, on this occasion, of a luscious change of diet from everlasting beef and charqui, but for ever was he bordering on a state of trepidation, and striving to inoculate us with apprehensions: at one time, "we shall never be able to reach a certain place," at another, "we shall certainly break down," then, "we shall have bad weather, the clouds look threatening, the sun means mischief, and a snowstorm is imminent, and then what shall we do? we shall be lost in

the snow!" &c., so that the porcine miscarriage was the last feather that disturbed the balance of my equanimity, and I gave him a bit of my mind. Oh! reader, never travel with a croaker! what misery that man caused me with his eternal doubts, fears and bad omens!

We were now very near the summit and on approaching it more closely, a thin column of smoke was observed rising over one of the conic-ovate mountain tops, apparently a long distance in front of us, and as the wind wafted it in our direction, I at once recognised it by its smell to arise from burning grass, and surrounded as we were by dense dry herbage exceeding a foot in height, anxiety led me to question the peon, who was inclined to think it proceeded from some encampment on the other side of the hills in front of us, a surmise very soon abandoned, by the rapidity with which it increased in volume and proximity. I at once ordered the cavalcade to hurry up and on we went as fast as the cargo mules would permit, and well was it for us that we did so, for on surmounting the brow, my fears were verified: onwards was sweeping with terrific roar and quick lambent dart a conflagration that threatened to annihilate us, indeed with all our speed there was barely time to escape 'ere the liquid fiery sheet overlapped the very road we had just traversed, where had we delayed but a minute or two our doom would have been irrevocably sealed.

After escaping this unlooked for danger, the aneroid was consulted, and the highest point we

crossed in this range was ascertained to be 3,000 feet above Singuil, which itself lies at a considerable elevation above sea-level; then passing over the crown and descending perhaps a hundred feet into an oval grassy basin, called the Ciénaga, a Punch-bowl of about 150 acres, in which cattle were grazing, and dotted here and there with hillocks, we took advantage of the seemingly peaceful scene to arrange the cargo, which had become seriously displaced in our late stampede; but although to all appearance nothing was to be apprehended, I never took my eyes off the direction in which the fire was spreading, and alive to every nervous impulse soon became aware of a change in the wind, when instantly there appeared a rushing, roaring, hissing flame, fully fifteen feet high, shooting over the summit we had just left and no more than 500 yards distant making straight towards us as fast as a mule could canter. The demon of fire held possession of the mountain and was determined to chase the unlucky intruders from his dominion or make them his victims. Not a moment was lost in mounting and bolting a second time from the invading, blazing scourge, which rages for days, sometimes for weeks, on the mountain tops amongst the tough dry herbage.

Crossing the ciénaga at a gallop and then rising gently we suddenly come to the precipitous edge of the mountain and looking down before beginning the descent, obtain a fine view of peaks stretching out below gradually lessening in height, with the ravine winding in and out between them

as a very deep, sombre and narrow cleft, and directly in front, at a considerable distance and across an invisible intervening plain, the Campo de Pucará, expands a chain of mountains, apparently short in length but very lofty, from the midst of which towers to the height of 19,000 feet and upwards, the bold head of snow-clad Aconquija. On the present occasion the snow lay on the sides of the giant peak only in patches, but in the quebradas, sparkling glaciers could be distinguished at intervals. Without further delay we now commenced the quick and steep descent; in the region of the summit, the soil was perfectly dry, a little lower dampish, then a little trickling of oozy moisture, next a stream and finally a rushing foaming torrent, a gradation of course very natural, but funny to trace and more accentuated by the extreme speed of our present downward shuffle compared with that of the previous upward climb. The quebrada below was at length reached, following which we soon came upon a stream of water gushing from the rocks, which gradually increased in volume and energy. The tops of these mountains are completely devoid of animal life, not even a condor was visible, but in this quebrada, in the presence of water, a pretty little brown bird, one of the *Dendrocolaptidae*, peeped at us in a very wild way as it darted in and out among the ferns and tangled herbage. The northern side by which we descended was scarped and filled with loose fragments of fissured rocks, chipped, split and cracked by aqueous and gelic agency, forming a track of extreme rug-

gedness, so dissimilar to the smooth path by which we gained the crown.

As we near the limit of our daily stage, a series of low hills present themselves in front, on one of which, round whose base we had to pass, lie the ruins of a town and fortress of the time of the Incas, and this it is that gives the name of Pucará (in Quinchua, fortress), to the village at which we are about to halt for the night. The first houses beyond the hills are gained and eagerly and intently we seek for food as our provisions have long been exhausted.

At almost the first house where we applied, there was a regular systematic orgy in progress, at which crowds of half-caste Indians were getting gloriously intoxicated upon native firewater, who, as soon as we appeared on the scene, noisily and threateningly insisted upon our dismounting and joining the symposium; an invitation which my man Friday was nothing loath to accept, but after a time I managed quietly to drive off the mules myself and ordered him out. Proceeding thence, things looked more promising as a herd of goats came in view, belonging evidently to a respectable adobe built house, on nearing which our mouths began to water at the sight of charqui hanging up in the sun to dry; but not a goat, nor a drop of milk, nor slice of charqui, would this inhospitable and gruff half Indian woman part with: in fact the mestizos on this route are by no means generous or polite to strangers. At last I told her we were famishing and begged her to sell a little meat at

any rate, and after a time she consented to let us have two reals' worth of slaves' food, which the peon quickly bagged and stowed away; but on offering her a Catamarca bank note for the amount, it was a sight to see her turn and re-turn the hieroglyphic papyrus, apparently scanning it back and front narrowly, without uttering a word, then suddenly as Atahualpa dashed the friar's Bible to the ground, did his descendant indignantly scorn the paper money and demand silver. Now as my bag of coin was locked up in a trunk and packed on the cargo mule, I assured the old lady she would have to rest content either with the note or nothing and forthwith rode away. Still travelling along the quebrada, at a depth of 800 feet from the summit, after skirting the base of several hills, we at last arrived at a stone rancho belonging to a family known to my arriero, where we found the master absent drinking in the pulperia below to pass away the time, and only a little boy and girl left in charge, the former of whom was at once despatched to fetch him. It is a mystery not alone how these people live, but that they live at all, seeing they spend their existence, here as elsewhere throughout Catamarca, in a state of intoxication induced by wallowing in nothing but ardent spirits of wine: to witness a whole population thus reduced into one vast alcoholate is a disgrace to the country: nay it is preferable to witness the astounding gluttony (the prose of digestion) of the Fuegians, than the beastly alcoholic intoxication (the poetry of digestion) of these up-country half-breeds. On the arrival of

the patron we bargained for the use of his alfalfa field and orchard for the tired and hungry mules, in which there was but scanty pasture, and forthwith laid out our encampment and prepared dinner; but on that day, it was a barren feast for both man and beast; indeed Duke Humphrey was by far too profuse in his invitations on this route.

Before retiring to rest, I had a chat with the owner of the house about the Quichua ruins visible on the hill which started upwards from our very tent, and he told me they were well worth a visit and that relics were now and then unearthed; so I determined to delay a day in the neighbourhood for the purpose of investigating the remains of one of the only two indigenous civilizations of which America has ever boasted. In the midst of our conversation two pedlars presented themselves for the purpose of spending the night on the premises; one of them afterwards came in, the very picture of grief, wringing his hands, moaning and groaning, so that I thought that something serious was the matter and questioned him on the subject. "Oh!" said he sobbing, "my companion is drunk, and I want to get drunk too, but cannot, as it is his turn and I have to watch the cargo!" The ultra-comicality of the scene was almost too much for me, but as it is dangerous in this country to indulge in laughter at the expense of especially an earnest man, I managed to restrain the volcanic fire within.

On the morrow, we prepared to scale the hill, taking as guide our host's brother, who was well acquainted with the spot. Laden with a spade, a

blacksmith's hammer, and a trowel off we trudged, but had to make a long detour of a mile and a half over the tops of the surrounding hills, in order to reach the summit on which the ruins lie, and such hard work was it as to necessitate a halt every few minutes to regain breath.

The elevation of these historic remains above the house where we were stopping in the quebrada was 500 feet and to gain them it was necessary to pass through a strong stone wall, about four feet high, which encircled two adjacent hill tops that have a slight depression between them, and enclosed a space of about a square mile, although on one side where the face of the mountainet was precipitous, there it was discontinued as needless.

On the nearer eminence stand the ruins of what was evidently the town, and which, scattered without any particular order or design over perhaps five and twenty acres of ground, still tolerably distinctly indicate the forms of houses with one or more rooms, mostly of square groundplan but varying in size, with a courtyard enclosed by stone walls attached to each. The house walls as they now exist are from six to eight feet high and of cut stone a foot in thickness, with external squared faces and cemented with red ferruginous clay, and exceedingly well and uniformly built. Windows are not very common and seem to have simply consisted of square holes, whilst according to appearances, the doors must have been about six feet high and narrow. Some of the dwellings were provided with small anterooms of different shapes, latibula

that suggested the idea of sepulture, and I looked about in vain for some traces of a roof, but not a single beam of wood nor scrap of metal was to be seen.

The principal ruins however lie on the farther summit, which has a greater elevation by a few feet than the nearer. Here stood the Quichuan Pucará or Acropolis, erected of great strength and upon some plan, consisting of a pile of rooms or rather halls, leading into one another by numerous gateways and galleries, the lofty and massive walls of which still retain a considerable height, and the outside one facing the valley, double to half its present height, forms an exterior ledge sufficiently broad to admit one person at a time, but whether this formed part of the original design, or was determined by the fall of the upper part, does not appear. The whole of these buildings, like those of the town, were built of squared, sharp-edged stones of different sizes, which give a flat smooth exterior to the walls; the narrow door ways especially, which lead one to suppose that the Quichuas were Cassius-like men, still retain the sharpness of outline of their early days, but instead of wooden architraves, a block of granite was invariably used. Round the interior surfaces of the rooms, square niches occur indenting the wall to half its thickness, and which seem to have been designed for the reception of images; and, as on the other hill top, so here, not a vestige occurs of wood or anything suitable for the construction of a roof, from which circumstance I surmised that earth was employed

for the purpose. How they obtained water in the fortress is a mystery, as the stream lies 500 feet below and no sign of wells could be discovered either in town or citadel. Close adjoining the main citadel are the remains of another building which the inhabitants of the valley call the Church, as some few years ago it had a square tower thirty feet high, which exterior steps leading to the top, but as this was laid low by an earthquake, nothing is now left but the outer walls revealing a large oblong building, which no doubt was either a sun temple, a keep, or both.

After inspecting the various immediate points of interest, we cast our eyes over the intervening space to behold that vast mass of Aconquija which, full of minerals, early attracted the attention of the Incas, and was worked by them of old, and to descry if possible, near its lofty summit, another fortress similar to the one we were exploring; it seems that these wonderful Chinchas were not only endowed with keen scent for the precious metals, but knew how to guard them from avaricious fingers.

We then set to work to excavate for relics, especially in the antechambers before mentioned, where I imagined they buried their dead, as I had been told by the professor of Natural History in the National College of Tucuman, that in searching one of these ancient mountain towns, about forty leagues from that city, he had discovered many remains of interest in those apartments; here then we prosecuted our investigations until the

solid rock was reached, to be rewarded only by a few broken bones, which certainly were not human. Two or three hours were spent in this labour in different spots without success, although my assistant brought me a small fragment of ancient pottery. In the angles of the larger rooms in every house, a layer of ashes and cinders was invariably found about a foot below the surface, and this must have formed the floor of the past; but below this there was no evidence of disturbance; and here and there especially in the corners we chanced upon holes indicating previous examination.

It was now breakfast time and as we had a stiff walk down hill in prospect and were already fatigued, I gave the word to return, very much disappointed not to find what we considered almost certain; however as our guide assured me that in the quebrada, especially after a land slip, Indian earthenware was frequently exposed to view, in the afternoon whilst we were busy bird collecting, I despatched him to reconnoitre in that direction, but unfortunately without result: and on our return, as we were indulging in a siesta beneath the tent, to our surprise an apparition stood before us in the shape of the antique Mestiza who sold us the Charqui the day before; she had trotted all the way, quite half a league, over very rough country full of sharp stones, to get her tenpenny note changed for silver, and I believe the old lady would have followed us to the end of the world for the same purpose. Next morning about sunrise, we once more started on our journey and descending by a

winding track further down the quebrada soon left behind the few remaining houses belonging to the village of Pucará; but at the last one, there were Cerealia in progress that instantly arrested my attention. Surrounding the hemispherical baking oven, which always stands outside the dwellings, was gathered an anxious crowd, and that the sacrifice was going on was evident from the steam issuing from the altar, so at once jumping off my mule I joined the devotions of the throng and succeeded in carrying off a ponchoload of newly baked bread, a very great treat for us all. Soon after, heading westward and entering upon an undulating open plain, the Campo de Pucará, we turn our heads to the east to gaze at the grand historical mountain Aconquija, whose base is about three leagues distant, and on whose hoary summit, within an ace of four miles high, no modern foot has as yet attempted to plant itself. This Campo de Pucará is the home of vast herds of Rheas, but otherwise the region is blasted with a most arid and desolate appearance, and we could almost imagine ourselves primeval man treading its solitary wastes. We now began to ascend what appeared to be a low range of hills, forgetting for the moment that we stood upon a very elevated plateau, and through these, two passes presented themselves, leading to Andalgala, whither we were bound; the shorter, the Paso de Chilka, in some parts hewn out of the solid rock, is only sufficiently broad to admit an ordinary carga, so as our mules were burdened with bulky packages, it was thought better to select the longer

route. As we surmounted the summit of these the last mountains that barred our progress before reaching our destination, and which rose but a few hundred feet above the plain just passed, what was our mute surprise on looking down as it were from a pinnacle to see, instead of a valley in front close below us, a most beautiful and extensive panorama spread out at a sickening depth of several thousand feet and which we were overhanging; it was a magic transformation scene that dazzled our astounded sight as well from its unexpectedness as its intrinsic grandeur. Looking westward far out on the plain below us, the great central sand plain of the province of Catamarca, extensive whitish patches reveal the dunes, Aconquija is on our right, and fifty leagues to the south-west, over the intervening level and across the dreaded Salinas, is discerned in the hazy distance the peak of Famatina which, lying in the neighbourhood of Chilecito, rivals Aconquija in altitude. Tarrying no longer in the presence of the sublime landscape, the descent was commenced, and as we were threading our way down a very narrow and serpentine and at times threatening track, winding amongst innumerable small eminences, which we thought would never end, suddenly my assistant had the gratification of being pitched clean over his mule's head, which astonished him not a little; and soon after, meeting with a quebrada, we followed it until the outskirts of the mountain were reached. Only once did we chance upon water and that so black and brackish that we could not drink it: my stupid peon, as

usual, had forgotten to fill the barrels before starting, and had likewise a knack of turning the taps and emptying them on the road on the plea that he was afraid the mules could not support the weight; so that it afforded me intense and wicked delight to see him obliged to take his fill of that foul slushy liquid. In this country, especially on desert routes, it is the height of folly to rely upon finding water on the journey, so that I always insisted upon taking a supply in advance, although continually deceived in the matter by my wretched raven. At last, a little after sunset we gained the valley, having descended between three and four thousand feet, instead of as many hundreds as we anticipated.

We press forward with all speed towards the sabulous plain that opens before us, but as the sun had now set, it became difficult to distinguish the track in the deep soft sand, a difficulty increased by the thick thorny brushwood with which the soil is covered; and although the guide was leading, we very soon became completely lost, and darkness overtaking us, nothing was left but to dismount and kneeling endeavour, with the aid of matches, to discover footprints. In vain! however at last we stumbled upon a hedge, which surely gave indications of a habitation, thought we, but no! all was desert, black and drear; so I determined to unpack the mules in the thick gloom and let them rest an hour or two until the moon arose. The unfortunate hedge, which belonged to a friend of mine, as I afterwards discovered, was rapidly dismantled for firewood and soon a blazing beacon flared, which

lighted up the forlorn scene within a hundred yards' radius. On this dark winter's night then, as we sat around the lambent fire in the desert, where was our dinner? although man is more or less omnivorous, we could not eat sand nor thorny saline shrubs; so in default of edibles, application was made to the barrels whence a small quantity of water was obtained, which we immediately boiled and had a few mouthfuls of hot punch. Then taking it in turns to sleep on the open ground, until the mother of the Incas appeared, up we rose to continue the journey all night over this dreary waste and about sunrise entered upon the sandy dunes, where the tracks of the Rhea or Suri were innumerable. Passing on thus till about ten the next morning, and when distressed with hunger, thirst, sleeplessness and the dreadful fatigue of crossing such an extent of loose detritus, and when we had almost given up hopes of ever seeing the Fuerte de Andalgala, we at last reach an oasis of green trees and enter the verdant lanes which embosom the town, and straightway our griefs are forgotten.

CHAPTER XLIV.

1,200 MILES UNDER CANVAS.—ANDALGALA.

CONTENTS :—Joyful arrival at Andalgala—An English Lord of the manor—European v. native-made winepresses—Our dwelling in Andalgala—A night visit from a scorpion—Andalgala and its projects—The Northampton of the republic—Spinning as they go—A German friend—A troop of dusky retrievers—The landscape from our corridor—Lambent tongues of fire on the mountain tops—Meteorologic triplet—The old Inca method of preserving vines from frost identical with that mentioned by Pliny—Study of the winds—Geology of Sierras of Catamarca—A floating male population—Argentine Cockneys—Departure of Lazybones—Salutary police law—Mule bitten by venomous snake—Visit to the smelting works at Pileiao—A musical circle—Wonderful infant-throat harmony—A weird scene—A chase after the Chuña Burmeisteri—The festival of San Francisco—Citizen soldiers—Lares and Penates—Veritable mistletoe and Wood flowers—Fauna—Rice and sand as shot for Hummingbirds—Poisoned nectar for the Trochilidæ—A new genus of beetle—An arriero's farewell tertulia.

The fort of Andalgala, so named after a very warlike tribe of Calchaqui Indians, the Andalgalas, that once inhabited these parts, is situated close to Aconquija in Long. 67 W. and Lat. 26 S. In times gone by, it was held as a frontier fortress of the Province of Catamarca, but now all military occupation having ceased, the blast of the furnace usurped that of the clarion, the pick supplanted the sword, there has arisen on its site a town ren-

dered important chiefly by mining industry; two large mining establishments in the neighbourhood, Lafone's and Carranza's, besides many smaller ones, having induced a population, than which one more peaceable and industrious, and at the same time less warlike, it would be difficult to find.

In Indian file we entered the lanes on the outskirts of the place and coming to an open space by the roadside, through which a fine stream of running water coursed, a halt was called and having unpacked and unsaddled the mules we let them go, whereupon the poor brutes made a rush for the water, as they had suffered much from thirst in our progress over the hot, sandy stretch from the Sierras to the Fort. I now indulged in a most refreshing bath in the delicious, cool rivulet whilst the others were getting ready an asado; and as I had several letters of introduction to the principal people in Andalgala, smartened myself up a little, mounted my favourite mule and set out to deliver them!

What a change from my late experience! how I bounded over the earth, with what delight sped through the lovely lanes overhung with bright green foliage and skirted with meadows and vineyards, every few yards greeting houses nestling in the thickets, and telling of homes however humble; to a gaze that had been so long fastened on sand dunes and flat deserts besprinkled with scraggy shrubs, themselves so sand-laden as to become confounded with the very soil and lead to the belief that this was their natural fruit, to taste sand,

to breathe sand, to be blinded by sand, nay even to wear it, to all the senses this oasis presented such charms, as to make me oblivious at once of the pangs of hunger which, by sociologists, are said to be omnipotent to man.

Thus threading the umbrageous way, I arrived at last at one of the houses of Mr. Lafone, an English gentleman who, besides his mining establishments, owns a great deal of property here and combines several interests in one. This highly talented proprietor lives much the life of a lord of the manor, and after a residence of about twenty years in the neighbourhood has succeeded in gaining the respect of all classes and much influence in the northern district of Catamarca. The dwelling consisted of a large rambling old building, standing in the midst of trees and backed up by a magnificent vineyard producing a large quantity of wine of fair quality, which I soon had an opportunity of tasting as the owner cordially greeted and invited me to breakfast: immediately after which an opportunity was afforded me of visiting the bodegas (wine-vaults), distillery and vineyard.

The former, large and cool, situated on the other side of the patio, were filled with pipes of wine of various classes, besides a fine European wine-press with all the latest improvements which I examined and praised greatly, but Mr. Lafone replied that although the instrument was of course superior to those of native construction, the expense and difficulty of transport to the Fort, completely cancelled its advantages, as for the

same money he could obtain several native-made machines, which collectively would do much more work.

In the vineyard of fifty acres, all the vines are standard, needing only when young a single post, but afterwards no support at all; and here may be seen grapes from the best European grounds as well as from Mendoza; some of the standard Moscatels at times yielding 140 lbs. of fruit each. Subsequent observation quite surprised me with the amount of viticulture practised in the district, as well as the good quality of the wines which are mainly exported to the neighbouring province of Tucuman, although some find their way in other directions; the business is not only capable of indefinite extension but very profitable, the only drawback in fact here as in Mendoza, being the want of barrels. Good English coopers in any number would soon make their fortunes in the wine growing provinces of this republic.

I had intended to pitch my tent in some open spot amongst the delightful vineyards, but upon mentioning my purpose to Mr. Lafone, he at once offered me a room in his house, a courtesy I was unwillingly obliged to decline, as I saw we should be deprived of the privacy necessary to the prosecution of Natural History pursuits, whereupon that gentleman kindly put at my disposal a building in course of construction, a few hundred yards off, and which we forthwith set off to inspect. My host led the way through the vineyards, and opening a wicket gate on to the road, there stood in front a

large massive dwelling consisting of groundfloor alone, whose exterior as well as fine interior patio were surrounded in front by grand broad corridors on Tudor arches. To witness anything like constructive design in this nook, so far removed from civilized centres, was a source of astonishment ; but Mr. Lafone, in addition to his other accomplishments, has been able in this and similar erections, to exercise his skill as an amateur architect. Here we found rooms already plastered, but not coloured, and as yet without floors, but to us houseless wanderers, such a residence was a paradise ; so thankfully accepting the proposition, I put spurs to my mule and rode back to our party, and no long time elapsed 'ere the animals were loaded and we took possession of our new and handsome quarters, which although not secluded, were sufficiently sequestered to enable us to pursue our labour in peace. A table, a couple of chairs, and a catre consisting of a lot of smooth planks raised on four posts, were sent from the house all of which I felt bound in honour to use, although not much accustomed to such luxuries. Smooth planks form about the hardest bed I know, the arms of our mother the most comfortable ; and so, after one trial, rolling quietly off on to the floor amid a heap of saddle gear, ponchos and rugs, no further efforts were necessary to induce sleep. But one night, after making up our beds, I in one corner, and my assistant in another, and placing my revolver handy, just as the word was going forth to douse the glim, a reflected gleam from the bright chitine of some swift moving animal caught my

eye and the next moment sure enough a large scorpion darted with erect and threatening telson right under my pillow, and as I am not partial either to the *chelæ* or the sting of that wicked-looking and formidable *Arachnid*, especially during sleep, he was ruthlessly hunted and slain; an accident that drove me to the boards again.

After seeing all things settled in my new abode, I started off to visit the town, lying about a mile and a half distant, in order to deliver sundry letters of introduction. The road, deviating from the usual Spanish chessboard fashion, led through a labyrinth of mazy lanes, lined with poplar, tala and willow, thick matted hedges, lofty banks hid under flowering creeping plants, orchards and vineyards, rendered alive by feathered song, and the whole amphitheatred by lofty mountains. On entering the town by the principal street and passing five or six blocks of houses full of stores and animated by the continual movement of persons evidently bent upon business, I found myself in the Plaza, a large open space, completely devoid of ornament, unless a row of posts encircling it can be so dignified. Several plans have been mooted to adorn it with gardens, walks, monuments and fountains, but here as everywhere else in this country, public spirit is evaporated amid the heat and din of contending political parties. The more important work however, of clearing the bed of the river and erecting dams to obstruct the periodical inundation that, during the short but sometimes heavy rainy season on the mountains, threatens in-

dustry, by covering the vineyards to a considerable depth with sand and mud, both very detrimental, an enterprise the necessity of which one would think sufficiently patent and potent to unite all interests, has been delegated supinely to the efforts of a few private gentlemen, such as Mr. Lafone, and of course with but indifferent results. This year more than ordinary anxiety is felt as to the consequences of the want of cooperation for so indispensable a measure, inasmuch as for the last two seasons a severe seca (drought) has reigned, induced by a scanty rain-fall of scarcely two inches, so that the forecast of the thoughtful few is burdened with apprehension, that when it does commence to rain, it will be with such violence, that the river laden as at present with sand and debris to an exceptionable degree, will become not only a mighty but surcharged torrent and sweep everything before it. Andalgala may well be termed the Northampton of the Argentine Republic; as in it may be viewed the rare circumstance of a complete synthetic industry. The hide is there grown, tanned and manufactured by a numerous army of Crispins, who labour to supply Bolivia with soles. The activity in this branch of business fairly astounded me, as did the heaps of leather cuttings lying in the roadways, a waste which like that of bones in Córdoba will be utilised as soon as the locomotive appears; in the mean while, the whole country furnishes a cornucopia for refuse gatherers, as the Argentines, of all people on the earth, are perhaps the least careful of scraps.

The town, although a telegraphic station and enjoying weekly postal communication with Catamarca, and otherwise important from mining, wine growing, boot-making and various industrial developments, is, barring its site, by no means beautiful, as therein are no buildings of any pretensions, save the magnificent and wonderfully stocked store of Messrs. Lafone & Franco, in which it would be almost impossible to express a need that should be unfulfilled. True it is the home of a very assiduous race which has discovered the perennial nobility of labour, as evidenced not alone by the men but by the very women who, as they perambulate the streets, are never seen emptyhanded, but invariably spin wool for the poncho manufacture as they go; but if of labour springs the desire for ornament, other causes before enumerated tend to repress the display of public spirit. The church is nothing better than a barn, yet the foundations are laid and the walls slowly rising of a temple more in accordance with the resources of the people, but as at present impecuniosity prevails the works have been abandoned for a time.

As I was trotting my mule into the Plaza and looking round for some one to direct me to a certain residence, the very gentleman of whom I was in quest, and to whom I had a letter of recommendation from Dr. Burmeister, Mr. Schickendantz a German, ran up and introduced himself and taking me at once to his house was very profuse in his hospitality; indeed during my residence at the Fort, I received great kindness and extreme assis-

tance at his hands. Mr. Schickendantz besides being an eminent chemist is a scientific botanist and metallurgist and was for some time manager of Mr. Lafone's smelting works at Pilciao, having been settled in these parts about nineteen years.

We now began to clean up the guns and commence operations, but on my return home after a few hours's shooting, I was chagrined to find that about half the birds were lost by falling in the midst of impenetrable thorny hedges, which everywhere border the lanes. The next morning however the difficulty disappeared in an unexpected manner, for after firing a shot or two, several dusky little urchins came running up timidly at first, but being encouraged boldly offered their services. These subalterns proved of the greatest benefit, being keen of sight, stealthy, nimble and quiet, and of epiderm so insensible as to be altogether unsusceptible to prickly terrors; with naked feet and almost breechless would these hardy youngsters climb through and over the densest spiny shrubs and *cacti* quite inaccessible, as I should have thought, to any animal; but as for ourselves, even with the greatest care, avoidance of contact and well-clothed, it was the occupation of some hours every night to extract with forceps the multitude of thorns with which our feet were pierced; in no other part, except perhaps San Pedro, did I observe a vegetation so pointedly offensive as at Andalgalá. After a short preliminary training these boys were formed into a regular brigade under a captain, each with his special duty; one had to carry the game-

bag, which was considered a peculiar honor, another to manage the ammunition, some to mark birds, others to retrieve them, all of which duties they untiringly performed with great delight and with no expectation of reward; so that no sooner had I fired my first early morning salute in the neighbourhood, than helter skelter down the different lanes came the various members of the company, to answer the roll-call and take each one his place, with a "Good morning, Sir!" and a broad grin on his good-natured bronzed features: and I verily believe it was a sad day in the history of the rising generation of the Fort, when they turned out *en masse* to bid the *jóven naturalista Inglés*, (young English naturalist) good-bye, as we mounted our mules to continue the journey northward.

Our room was situated under a wide corridor, and on the other side of the patio in front, were spacious arches permitting a view of the green alfalfa fields and hedges beyond, backed up by different mountains dominated by Aconquiya, and once at the end of August a violent snow storm came on which, lasting two days, covered the eminences to their topmost ridges and the plains to our very door with a brilliantly white mantle, during the continuance of which, several rare birds, driven for food and shelter beneath our roof, were inexorably devoted to science. No less enchanting was it to watch, from our quarters, the alternate play of light and obscurity as the rays of the declining orb crept up the hill sides, leaving us in penumbra deepening into absolute darkness, whilst the sum-

mits were bathed in roseate hue, and then to witness the successive flashes with which they bid adieu to each heightening peak, until at last the loftier head of Aconquija alone retained its aureola —when daylight died, leaving no memento until the morrow. Another scene more weird, less chaste, was to behold the summits a prey to tongues of fire;* the waves of flames now lost, now rushing into existence to lick the guiltless air, as they belched forth hither and thither their lambent forks, and revealed the glowing outlines of the peaks, fascinated my imagination, especially when linked with the numerous legends of a great lake and ghostly fortress which, the natives aver, lie on the top of Aconquija.

After the termination of the snow storm, bright sunshiny days, with fine clear moonlight nights accompanied by severe frosts, succeeded; with regard to the moon, the weatherwise amongst the Andalgalenses say :

Como pinta quinta,
Si como quinta octava,
Como principia acaba.

which is pretty nearly coincident with Herschell's meteorologic code. Hard frosts are very frequent here during the nights of winter and early spring, and if attended, as usually, by hot days, commit great havoc amongst the vineyards when

* These fires which sometimes last for weeks, covering the whole summits of entire mountain ranges, are usually lit purposely, in order to refine the herbage.

the vines are budding; in fact this direful combination is very fatal throughout the republic to fine culture, such as the mulberry upon which the silk industry depends. It appears indeed, that it is not the frost itself that is so injurious, but the scorching sun of the succeeding day, whilst the frost is yet on the plants. The old Incas seem to have been aware of this and pursued a method identical with that mentioned by Pliny in his Natural History, that of shielding the vines from the hot rays of the early sun, until the frost gradually disappeared, and this they accomplished by burning guano so as to cause the vineyard to be enveloped in thick smoke, a plan the French have lately imitated with success, using wet straw in lieu of guano.

On the extensive plain of Andalgala which measures about 75 miles by 75, the winds which commence usually in August, prevail between three and four months until the rains set in, and form a very interesting study, as there are several different ones blowing at the same time. Some of them proceeding from a northerly direction impinge on the Sierra de Velasco, a range crossing the south-western extremity of the plain in a N.W. line, and being deflected thence through the quebradas, make a half circuit so as to emerge near Lóndres (London) as southerly currents. The so-called Zonda here arises from the valley of Carizal on the western slope of Aconquija, and is not generally a hot wind at the Fort, but in certain seasons, at Pileiao, where it has to pass over médanos

(sand dunes), it gains heat, and proceeding still further southward over the Salinas of Belen, becomes a Sirocco; it is always however very strong and laden with dust. At Belen, the winds hold a meridional course, and when it blows north one day, it veers to the south the next; but in the valley of Gualfin it is that the most extraordinary anemological results are visible; blowing usually from the north in a strong and persistent blast the wind has heaped up to the height of 10,000 feet above sea level, huge sand glaciers on the Sierras of Gualampayá, a range lying westward of it with but little inclination to the meridian. In fact the complexity of the wind problem on the plain of Andalgala is such, that if erected on it, the already bad character of the anemoscope would assuredly soon become irretrievably ruined.

The sierras of Catamarca consist principally of crystalline rocks, granite, mica-schist, gneiss, &c., and in the vicinity of trachytic eruptions, abound in mineral veins: for instance at the Capillitas on the sierras of Atajo, occur lodes consisting chiefly of copper ores in the form of sulphurets and arseniurets, with those of lead and zinc containing silver and gold in fair percentage. In the western districts of the province, signs of recent volcanic disturbance are met with in the form of pumice stone and obsidian. Tertiary or sedimentary rocks fill the valley of Gualfin, where there is a thermal spring of great repute, and they seem likewise to underlie the alluvium of the great plain of the Fuerte. In the valley of Santa Maria, on the

north of Andalgala, the same tertiary formation appears mingled with gypsum, and even on the highest points of the mountains, some remains of this period are still visible.

As the Fuerte de Andalgala occupies the north eastern extremity of this great plain, so does the important town of Belen its north western, almost the whole of whose male population is floating, that is, continually engaged elsewhere, mainly as arrieros, in which capacity they bear an exceedingly high character; so that there exists a sort of free-masonry amongst Belenistas by which they recognise one another wherever they meet, much in the same way as the "Hurrah! for St. Werner's" distinguished the Derby football players of the past. A few leagues south of Belen lies the village of Lóndres, and as we, subsequently on our route to Salta, met some women who had just come thence, I told my assistant, a London man, that they came from London too, at which he was mightily astonished, declaring that they did not look like Cockneys. A message by chasque (on foot) was once forwarded from that village to the capital of the province, and the Governor, enquiring of the bearers whence they came, received for reply "De Lóndres" (from London), whereupon His Excellency, putting an Anglican construction upon the answer, exhibited great surprise and was intensely gratified to think that the English government should do him so great an honour.

And here it was, in Andalgala, that we got rid of our celebrated croaker, who was afraid of every

living thing, tree, piece of snow, or cloud ; and of course he took his companion *Mal génio*, alias, Lazybones, with him ; as the latter had contributed to our amusement, we were sorry to lose him, although he was the basest of mongrels, but for his master no tears were shed. The management of the peon class is one of the greatest difficulties and annoyances the traveller has to put up with in these and all other parts of the country, and as he is absolutely dependent upon them, they take advantage. To climb mountains, cross deserts, swim rivers ; to endure heat, cold, hunger and loss of sleep, all bad enough in their way, are as nothing even in the aggregate to the sufferings caused by an unprincipled or even careless servant. In the first place, they will not enter service without an advance of wages, generally a month's, and as they invariably get drunk on every opportunity, it is impossible to send them on the simplest errand, expecting them to return sober. One capital police law however reigns in Catamarca which keeps them somewhat in order. Every employer is obliged to purchase of the police a small book, in which the man's age, period of service, and wages are entered, and this the master has to sign in presence of the employé and the officials ; the book itself remains in the custody of the master, but a copy with the police ; so that labourers are in a manner under police surveillance. Armed with this register, when the man refused to continue his work before the month was up, and urged I believe by fear of what was before us complained to the police, I at-

tended at the office and presented letters from the Provincial government which ensured instant and polite attention; and the result was that the raven was compelled to restore that fraction of his wages not worked out, on pain of incarceration.

But a more serious mishap occurred at the Fort, in the loss of a valuable mule, bitten by some venomous snake, the croaker said; but in my opinion its sudden death was the result of feeding upon a poisonous herb, especially as its body swelled up afterwards to an enormous size.

After repeated pressing invitations from Mr. Lafone, a friend and myself at length started one afternoon on horseback to visit Pilciao, four leagues from the fort, and the site of that gentleman's extensive smelting works. Our route lay almost due south, by the side of the telegraph wires, over the plain that, as far as eye could reach, was carpeted in extensive patches with the *verbena crinoides*, which about a foot high distilled a rich bouquet from its purple flowers. A little further on, after passing through bosquets of low growth of the Retama (*Balnesia retama*) and Jarilla (*Larrea cuneifolia*), we emerged upon the sand dunes which continued to the vicinity of Pilciao, where we met troops of mules on their journey to the mines distant thirteen or fourteen leagues to the north of the works. Woods of Algarroba (*Prosopis dulcis et alba*) were now entered which, as we approached our destination, resolved themselves into a dense forest of giant growth, in whose midst we were surprised to find located a village of huts and ran-

chos containing a population of at least five hundred, including a hundred workmen and their families. Through giant gates we rode into the large square wherein nine enormous furnaces with their capacious maws, stand ready to belch forth their volcanic blasts. On either side are large open sheds for ore stamping and other purposes; buildings for butchers, bakers, carpenters and smiths, all alive with artisans, stores, a school, a church in process of building, and lastly a large rambling dwelling for the manager. All these structures, forming together a miniature Saltaire, are erected with as light materials as possible, for the establishment is nomadic, depending upon fuel and fodder, the twin sovereigns that absolutely determine its locality: no surprise therefore need be entertained why the smelting works should be so far distant from the mines, especially as the furnaces, when in full operation, consume as much as thirteen or fourteen cartloads of wood a day, a demand which not even the cyclopic trunks in the neighbourhood can long sustain. The property is backed up by large potreros, all of which are well stockaded, but not a blade of grass is to be seen anywhere, all sand, sand, sand; so that green pasture has to be sent for daily all the way to Andalgala four leagues off, taking in exchange the pure, limpid water of Pilciao in barrels.

On the occasion of my visit, although any amount of ore had accumulated and was awaiting transport at the mines, only two furnaces were working, on account of the seca (drought) at the

Fort limiting the supply of fodder. Of course it was impossible to drive mules thirty or forty miles up a very rough and mountainous road, load and bring them back again, without food.

About two leagues distant are other smelting works, called the *Constancia*, belonging to *Señor Carranza*, and between the two establishments, since their foundation about twenty-eight years since, they have produced 150,000 quintals (6,700 English tons) of pure copper, in addition to a fair percentage of the more precious metals.

I was received very kindly and entertained for two days by the family at *Pilecio*, which consisted of *Mr. Lafone*, his married sister with two daughters, and an English governess, and a more musical circle I never entered. *Mr. Lafone*, who is a government school Inspector for the province of *Catamarca*, in a noble spirit, has established a school in the works, at which the attendance of all the children of the employés is made compulsory, and wherein this earnest educationist, notwithstanding his numerous business engagements, spends several hours daily in personally superintending the instruction, especially the musical branch, and no more assiduous devotee *St. Cecilia* ever consecrated: a further demand upon the time of this indefatigable man results from the preparation of one of the most promising of his pupils to fill the rôle of a teacher, and thereby relieve him from much of the burden of tuition. It has been said indeed that to sentence a man of true genius to the drudgery of a school is to put a race-horse in a mill, and

the same sentiment is current in the commercial world, but the finer the powers, the more excellent the work.

Dr. Busby himself, of famous memory, would be delighted with the discipline here maintained: at morning roll-call, any absentee is not only metaphorically but physically debited with a black mark, under the sentence of a whipper-in who, with his instrument of office, is specially despatched to bring in the truant.

Although precociously quick in all the elementary branches of learning, the musical proficiency of these manikins, really astounded me. I have heard and admired the singing in our cathedrals at home, but never have I listened to such delightful harmony, perfect time and tune, as issued from these infant half-Indian throats at Pilciao. Tiny ragamuffins of six or seven years of age, who have never worn a shoe, and whose naked bodies, scarce covered with a tattered shirt, revealed the dusky skin through numerous fluttering rents, are trained to take their parts, and can not only read Mendelsohn, Beethoven and Mozart, but warble them to perfection.

During my sojourn at the smelting works, I went out one night with my gun in the glare of a full moon, and was so struck with the weird beauty of the scene, that if I had been born in the ranks of the artists, I should have departed from their canon and attempted to paint the giant leafless trunks, whose shadows mottled with the dancing mosaic of lunar rays dazzled the sight, the roaring lambent

furnace flames that shooting fifty feet into the air darted their fitful lurid flare, the ocean of glistering sand, the sentinel dunes and the hundreds of barking foxes all around; but I shot nothing and next morning set out on muleback accompanied by an old rastreador (tracker) for the purpose of hunting the long-legged *Chuña Burmeisteri*, perhaps the most difficult of all birds to bag; and although numerous tracks were visible and their harsh, croaking, prolonged cry resounded in every direction, they were far distant and we could not get a sight of them. At last my companion spotted a brace right ahead, but in spite of digging spurs into the mules, much to our chagrin they distanced us, as the loose sand buried each stride to the depth of a foot at least; nevertheless we marked them in a thicket of brushwood piled high with sand, only to lose them, as without dogs it is impossible to put them up; in fact the natives never think of chasing them otherwise. Several were subsequently seen darting from one dune to another with a scamper quicker than that of an ostrich; but as the *Chuña* was so dreadfully shy, my barrels slew other birds, amongst which were the scarlet-headed *Dendrocopus atriventris*, and the curved-beaked *Nasica gracilirostris*.

After a two days' visit to the metallurgico-musical spot of Pilciao, I returned to Andalgala just in time for the annual church festival of San Francisco, which takes place on October the 4th, and on that occasion Mr. Lafone brought his juvenile choir in carts from the works to sing High

mass in the parish church, the effect of whose harmony was however somewhat marred, as whilst the service was proceeding inside, two or three hundred valiant National Guards were amusing themselves outside with Chinese crackers and volley firing. Never was there a people so addicted to crackers, long strings of fifty at a time delight them ; and as for muskets, deprived of them at the usual weekly Sunday drill, when they do get hold of them, the air is rendered lively. The holiday dress of these citizen soldiers consists of a military cap, a poncho thrown over a shirt and trowsers, and sandals on naked feet, and before they go through their exercises, the ponchos are doffed and piled high on the plaza posts; then to the martial strains of as mild a military band as ever I listened to, consisting of a drum, a clarionet and a fiddle, these warriors undergo their training; after which a dinner of hot empanadas (baked meat pies), that the wives and relatives of the men bring in for sale and distribute to them as they recline about the plaza, winds up the proceedings.

It is an invariable custom for all the people in these parts to possess an image of some patron saint in their houses, and on festival occasions to carry them to the church to be blessed and there leave them until the following day; and a funny sight it is to watch the various families, as they wend their way to the temple, bearing aloft their lares and penates and headed perhaps by an old drum and boys all the way letting off crackers.

Around Andalgala I was surprised to find a species of mistletoe (*Loranthus verticillatus*) growing on many trees; but on the Algarrobo especially, one closely allied to the English, which the natives call Liga (*Phoradendron holosanthum*), and of which the goats are so immoderately fond that boys climb the trunks to cut it down for them; moreover so strong is the clasp with which this true parasite embraces the dense, hard stem, that it causes efflorescence and produces those beautiful and fantastic wood-flowers, a specimen of which I forwarded to the British Museum.

Over fifty different species of birds fell to my gun during our sojourn in this neighbourhood, the more noticeable amongst which were the *Rhinocrypta lanceolata*, a comical looking creature that, as it scampers across the path, nods incessantly crest and tail, both stiffly erected at right angles to the body; and the *Phytotoma rutila*, the male and female of which are so dissimilar in colouring, as not to appear of the same species. Of the beautiful *Trochilidae*, about five species here put in an appearance, the two most remarkable of which were the *Sparganura sappho*, and that peculiar and burly form the *Patagona gigas*, measuring eight inches from the tip of the beak to the extremity of the tail. These Humming birds however are only found in this district when the amber-coloured cups of the Idiondilla (*Cestrum pseudoquina*), and the yellow clustered bells of the Palanpalan (*Nicotiana glauca*), are in full bloom, the latter of which here reaches an extremely fine growth; although I have

noticed them feeding on the magnificently-scented golden flowers of the Chañar (*Gurliaca decorticans*) a tree that covers the country around Andalgala.

As I had now run short of small shot and was anxious to secure a specimen or two of the tinier *Trochilidæ*, it was necessary to resort either to sand or rice; but contrary to the experience of all other naturalists I found the former stun the bird indeed, but render it useless by destroying the plumage, and the latter of no manner of service, as it completely broke up in the discharge; so that until it occurred to me to resort to the cruel aid of poison, I was completely non-plussed. Whilst the peons were therefore engaged in cutting down much of the *Nicotiana glauca* and clearing the ground beneath, I proceeded to introduce a drop of syrup impregnated with arsenic into every perianth which to the number of 150 or 200 loaded each raceme, and retired to a little distance to watch the effect. First came members of the different small species which, evidently in possession of a very delicate taste, quickly scented treason and abandoned the spot; but at last one of the *Patagona gigas* presented himself and boldly took a prolonged draught of the deceitful nectar; something was assuredly the matter with him immediately after, for fluttering his wings violently and ascending slowly to the top of the tree with an unsteady gyratory motion, he there perched, all the while continuing a rapid alatory movement and finally actually vomited. Although the actions of the *Pa-*

tagona, combined with the notion of a Humming bird retching, were ultra-comical, I could not laugh in face of the obvious distress of the poor creature. Down he came again very unsteadily and continually vomiting and ultimately flew gently away, but was found dead next morning quite close, by one of the corps of juvenile scouts.

Many an unsuccessful search did I prosecute for the *Burmeisteria mirabilis*, a new genus of beetle of the family *Melolonthidæ*, the only known specimen of which was here captured by a lady in 1867 as it flew in one evening to the lamp, and was described by Mr. Schickendantz in a paper read before the Entomological Society of London, January the 6th, 1868.

As I had to engage two fresh peons at Andalgala before proceeding on our journey, and one of them the arriero (muleteer) was a very respectable man who, although belonging to Belen, had many friends in this neighbourhood, I was induced to allow him to give a farewell tertulia to his circle of acquaintance, of course at my expense. Now these tertulias or evening receptions are an institution deeply interwoven into the framework of society and take place every Saturday, at one or the other of the ranchos around Andalgala, and as admittance is perfectly free, wheresoever the drum announces the summons, thither flock crowds to dance the Cueca and Gato, drink raw aguardiente and revel in intoxication, for here drunkenness is considered the normal state of man. What most astonished me at these symposia was the endurance of

drum and clarionet; for twelve mortal hours, from 3 p.m. to 3 a.m. would these sweet musicians sturdily chant the praise of Bacchus, with only such slight intervals as were necessary for quaffing the intensely fiery cordial, and during which the guitar struck up, accompanied with melancholy-strained impromptu song. The floor would receive such of the devotees as were incapable, who prolonged their sleep till about noon of the following day, and at three o'clock on Sunday morn those of the guests that still retained the use of their understandings, would take to it of their own accord, only to rise at the same hour in the afternoon to recommence the orgies in a similar manner, and prolong them till cock-crow of the Monday.

Taking advantage then of the permission, Don Neoptólemo set out for the town during the afternoon and invited all his friends, and in the meantime I gave him *carte-blanche* in the candle, cracker, cake and spirit line. Great were the preparations, in the disposition of seats, the illumination of the immense corridors, and the construction of a towering bonfire in the middle of the patio, and when all was arranged, the big drum made his appearance, bringing in his wake the clarionet as a satellite. These worthies selected the most central position and having seated themselves, the drum began to beat the Gato, which is really a melodious strain, but rendered hideous on the sheep skin, as half the notes are struck on the wooden rim. The tattoo soon awoke the neighbourhood, the visitors appearing at first only in dribblets of twos and

threes; but when the crackers aided the hullabaloo and the beacon began to blaze, they flocked until at last a throng of at least one hundred and fifty was gathered to honour the occasion. Dancing and drinking commenced simultaneously, and many soon became recumbent, but in spite of this, no *blatta gigantea* could exceed the terrible earnestness of the drumstick who, as thrice he slew the slain, provoked the blatant clarionet to give the hautboy breath. Then as during a short respite the *guitarrero* improvised a classic ode in honour of the host, something similar in sentiment but infinitely superior in tone to "He's a jolly good fellow," I was fit to melt away in secret rapture. The festive scene was kept up as long as any of the guests remained erect, but the majority were rooted to the floor till midday following.

CHAPTER XLV.

1,200 MILES UNDER CANVAS.

CONTENTS:—Affectionate adieu to a formidable cavalcade—State educational provision—Water cress—Fern snuff—Touching devotion of an aged palmer—The Trembles—A cargo wrecked into splinters—Der Knabe vom Berge—Heaps of silver and copper ore by the roadside—A bristling Turk's-head—Rural spurs—Within an ace of being frozen—A dreadful night for man and beast—A muleteer after strays—Bones dyed with carbonate of copper—The dash of sand billows—A leash of guanacos—Sand ripples determine the wind—Writing under difficulties—Frigid sand—Dumb-motion—A quick ear and a midnight visitor—A four-o'clock roast—The desert—Sand glaciers—Chinese and Japanese money—Sunday amusements—An amiable Chief of Police—Beneficial regulations—Santa Maria in danger from sand—Crossing the neck of Tucuman—A park region—An ancient English country seat—Northern thirst for southern vintages—Yankee smartness on Indian features—Multitudes of crosses by the roadside—Mud and sand inundations—A glimpse of returning civilization—Cafayaté wines—Strata of different coloured clays—A natural Brighton pavilion—A last, fond, lingering look—A cloud picture—Las tres cruces and superstition—Im-moralists—Fauna and flora—Eastern practice of muffling the features—Taken for pedlars—Sauce redondo and its birds—Curious woodpecker fashion—Sovereign remedy for snake-bite—A peep into a fawn's eyes—An Argentine squire—A determined lady botanist—Bolivians fattening mules—Fair Salteñas—A splendid mill—Aloja de maíz—The white domes of Salta entice—An indispensable "vademecum."

Our stay at the Fort, had been prolonged a fortnight beyond the appointed time by having to wait for a supply of ammunition from Buenos Aires and the great difficulty of obtaining mules. After excessive exertion for two weeks and the payment of a heavy price, I succeeded in procuring two and immediately our cavalcade of six animals,

two for cargo and the rest for the saddle, was put into trim for the hazardous journey in store. At last everything being in readiness we took leave of Andalgala at 3 p.m. on Wednesday October the 6th, Bucephalus leading with the bell and ridden by one of the peons with a gun slung over the shoulder, then the two pack mules each with a heavy load and attended by the arriero riding a third, a fourth was bestridden by my assistant likewise carrying a fowling piece, whilst I brought up the rear on my jenny, with a rifle slung to the saddle bow. We two wore revolvers and all carried knives, so that our party was both numerous and formidably armed, and as we filed out of the town, such favourites had we become by the politic banquet, that a large number of the population turned out to wring our hands and bid us Godspeed.

So passing out by the cemetery, we headed westward for the mountains, a distance of three leagues to a place called Choza, the road to which, gradually rising from the plain to the heights, afforded really fine views of both; and after crossing several deep gullies, whose beds strewn with rocky boulders evince the power of the floods that descend from the mountains in the rainy season, we entered the quebrada of the same name, passing cultivated fields on our way, which led us innocently to suppose that pasture would be easy of access, but at the first place we enquired for it, they refused to accommodate us, a piece of inhospitality that necessitated trudging out of our

course another mile higher up the ravine. Even then it was a work of some difficulty to find food for the animals, but immediately the object was gained, our tent rose as if by magic on the borders of a stream that percolates the quebrada, the arriero went off with the mules and the peon lit the fire and prepared dinner. The night was cold, as we were 900 feet above the Fort, or 3975 above sea level, just at the entrance to the mountains, and felt the fresh blasts from their summits as through a funnel. Next morning, as usual, we surprised daybreak and started by sunrise, retracing the steps of yesterday down the ravine, and to my amazement passed at that early hour several children barefooted yet encumbered with books and slates on their way to school; indeed no matter what nook or corner of the Argentine Republic is visited, there are the sure evidences of state educational provision. Our proper road now lay before us and after an additional league or so, we entered the *Paso de la Muchacha*, another quebrada in the mountains in preference to the one just abandoned, as the latter is in bad condition and unfit for the passage of cargo mules.

This pass is exquisitely pretty, for besides being clothed with a fine arboreal growth, it abounds in creeping and epiphytic air plants (*Tillandsia*), one species of which already graced the scene with its delicate pink and slightly perfumed flowers; nor could we fail to notice, in riding along, the *Equisetum giganteum* or two species

of water cress of very agreeable pungent flavour, the *Mimulus luteus* and *M. parviflorus*, the native name of which is Berros, as well as the fronds of a magnificent fern the *Notholaena nivea* which, when dry, is called *Topazaires* and pounded serves for a very fragrant snuff. Three or four fire-tailed Hummingbirds likewise here put in an appearance, but as it is impossible to collect *en route*, no doubt the beauties still enjoy that liberty so dear to them.

The ascent now became accentuated and as we laboured up the quebrada, it gradually became less and less interesting, until at last it degenerated into a barren watercourse flanked by rugged precipitous sides. Then it was we fell in with a wonderful old man trudging along staff in hand, and upon enquiring whither he was bound, were amazed to learn that he had walked all the way from Salta to Catamarca, a distance of about 420 miles, on a pilgrimage to keep a *promesa* (vow) to the *Virgen del Valle*, and was now on his return home; and although we were urging the mules to their utmost over the broken ground, this lithe and venerable pedestrian, with nothing but a piece of hide beneath his soles, always kept in front, and on our surmounting a higher eminence, took a short cut and was soon lost to view, but as we heard afterwards, reached Salta before us after a weary journey of some 800 miles on foot. I could not help honouring the simple devotion of this athletic palmer who, with neither scrip nor purse, toiled on his pious errand, relying for food and shelter upon

the houses met with on the road, where both are freely offered to pilgrims.

As this was the road to the Restauradora mines owned by Mr. Lafone, we were not surprised, on gaining a spot called Pulperia, to see a troop of mules disburdened of their loads of copper ore and resting whilst the men cooked their dinner. From this station, ahead up the eastern slope of the *Sieras de las Capillitas*, and indeed in the whole neighbourhood of the Aconquija range, a tremendous metamorphic mass, a peculiar disease called Tembladera, or the Trembles, attacks strange mules, but only at a certain elevation, and exempts animals reared in the district, as well as man generally, from its ravages; and so malignant is the *genius loci* as to demand annually whole hecatombs in sacrifice. Amid the Mongoloid races such a locality would be endowed with a complete army of schamans to exorcise the evil spirit, but the Catamarqueños make no effort to investigate the nature and causes of this endemic distemper, with a view to its removal. One peculiar feature about the diagnostic symptoms is, that a dry and clear air neutralizes its virus, but if the atmosphere be damp, or rain actually falling, then the animals are suddenly seized with a violent fit of trembling, quickly succeeded by convulsions, which terminate in a speedy death, notwithstanding the general application of aguardiente frictionally to the ears and nostrils, as a precautionary palliative. Whether this malady arises from poisonous herbage or noxious exhalation from the soil is as yet unknown,

but the only remedy is to remove the stricken beasts immediately into potreros, or better still, entirely from the region.

Although before starting from the Fort I had heard much of the Tembladera, such little attention had been paid to the warnings, that not even an extra mule had been provided, but it may well be conceived how intensely eager and nervous was our inspection of the clouds as we approached the mountain sides, an anxiety heightened to fever point by the continued reiteration of the men, that if it rained whilst we were crossing, we should infallibly be left almost without a living hoof in our company. But meanwhile, as we were dwelling with dismal foreboding upon the imminent probability of being abandoned on the mountain tops without means of locomotion, a mishap occurred that served for a time to distract our attention from possibilities to the actualities, incident to the road; for, as on leaving the gully beneath us, we began the direct ascent by a tolerable but very steep track, and in the act of doubling one of the numerous sinuosities of a path about four feet wide hewn through the solid rock, the cargo mule that carried my specimen as well as apparatus box, dashed both against a projecting ledge, so as to loosen the girths as the animal pawed and lifted itself up the severe acclivity. I shouted to the arriero, but in vain, before he could call a halt, the aparejo (pack saddle) slid backwards, the mule gave a spring to clear the debris, and down the road shot the burden wrecked into splinters; fortunately the side rock

prevented the whole mass rushing headlong down the mountain side to disappear for ever; but, as it was, besides the loss of six weeks' labour, the damage of valuable instruments and the waste of precious time, the vexation arising from the needless additional toil of repairs and reloading, rendered me very angry with the muleteer, to whose unconcern the accident was entirely due.

Shortly before this untoward casualty took place, a mountain boy seated on a disreputable hack had overtaken us and was of considerable use in aiding to gather up the fragments and repack, and by his cheerful gladsome ways enlivened the loneliness of this solitary but majestic region, where no life but the vegetable, and that of a very elementary kind, shed a ray of comfort; a little coarse tufty grass, moss and lichens, with here and there our old English friend the elderberry in flower, alone strove for a very precarious existence. This *Knabe vom Berge* soon after took another quebrada, but for a long distance we could both see him and hear his pleasant *Berglied*, as he played with considerable taste on a homemade reed flute.

From this point, as we journeyed onwards ever ascending, our path was lined with small heaps of silver and copper ore which, abandoned to lighten the weary mules on their nostalgic passage from the mines, tempted wayfarers gifted with the talent of appropriation, so characteristic of the Cordovese in the matter of bones, to pick up mule loads at the expense of the miners. The weather now became cloudy and threatened either a rain or a snow

storm, either of which was fraught with very great danger to the travellers; so that as soon as ever a small plateau was reached, whereon mule troops usually rest, we set about applying aguardiente to the beasts of burden, a proceeding which they, especially the horse, resisted most viciously; and then having breakfasted, no time was lost in remounting and pursuing our upward course, which soon introduced the cavalcade into a region of giant *cactus*, chiefly of the Candelabra species. The grotesque stems and branches of these hardy mountaineers projected their newly formed defensive glistening spines, about four inches in length, and in such incredible numbers and so closely set, as to give a frosted appearance to the whole of the huge columns, each of which crested with a bristling crown, so as to resemble a monstrous hoary Turk's head broom, needed no motto of *noli me tangere* to ensure the utmost respect from both man and beast. Eighteen species of *cactus* are as yet known in the province of Catamarca, but some still await description and classification.

Rolling over the summits right down upon our path swept the massive clouds, enveloping us with so cold, raw and vaporous a mantle, that we were obliged to dismount and disinter blankets, ponchos and rugs, and even then muffled like Laplanders, as we continued ascending, the snow began to fall and our numbed hands were scarce able to hold the bridles. However by dint of pushing on through the drizzling sleet and snow till late in the afternoon, we managed to gain a place near the summit,

called *Las casas coloradas* (Red houses), from the sedimentary red rocks of insignificant depth which here strew the granite. In this solitary spot, all that met the eye was a single stone hut, in which reside two or three shepherds tending a flock of sheep, a herd of cattle, and a few horses, to maintain which, I could discern nothing else than red ochrous earth, dotted at intervals with tufts of very coarse grass, and a few young shoots peeping occasionally from rock crevices, a subsistence that any respectable mule would disdain, especially such as, endowed with Carlyle's perennial nobleness of labour, expect liberal treatment. Awhile we stopped to exchange a few words with these lone bucolics and to enquire our road to the Restauradora mines, which we found to be still a league distant: so that although our intention was to have passed the night at the *Agua del Chileno*, a stretch of a league beyond them, where water is abundant but shelter absent, yet as darkness was approaching, the weather so bitter and a heavy storm brewing, we thought it advisable to stop short of our goal and forthwith put spurs to the jaded mules, with the hope of finding at the mines temporary protection for ourselves and fodder or Algarrobo pods for them. In this country, a saddle mule will not move without spurs, and such spurs! a huge brass apparatus with multitudinous straps and chains, and rowels from the size of a crown piece to that of a saucer; they have the advantage however of making a jingling, which is generally sufficient without putting them to their obvious use; but in

this case, when the poor beasts had already journeyed some ten leagues over very rough and steep mountainous tracks, without a moment's release from their heavy burdens, a very long pull even when in good condition, the tinkling alone of the brazen goad was ineffectual, and I am afraid they felt its revolving points somewhat severely. At last the summit was gained and at this elevation of 8,755 feet above sea level, the wind was almost strong and piercing enough to cut us in twain, and in spite of frequent application to the spirit flask, we were within an ace of being irremediably frozen. The mountain side declined gently from the vertex, so passing down the slope in the midst of increasing gloom, we reached the spot where the road branches off to the mines lying half-a-league further up, but on heading for them, the path was found so intolerably rugged and dangerous to travel in the darkness, that after proceeding a few hundred yards we suddenly abandoned the idea of seeking refuge that night, and having found a small space less broken and steep than the rest, forthwith encamped, unpacking the mules and pitching the tent with its back to the fury of the gale. Round the entrance to our frail abode were ranged the cases roofed by the hides which usually served as covering for the cargoes, and into this snug retreat the peons crept for the night.

Two of the mules bore a bad reputation for straying and these we locked together by a common halter, the madrina was hobbled, and the others were let loose to find what scanty supper they could

among coarse, tufty and sickly herbage. As the night was fearfully dark and tempestuous, with a thermometer below freezing point, no fire was attempted, as it would have been impossible to collect fuel from the sporadic *Jumi* (Incense shrub), the only semblance of woody fibre that grows in those parts, and which emits much smoke with little flame and less embers, the latter being the only serviceable element of combustion in camp cookery. So we dispensed with the evening incense and reserved it for the morrow, meanwhile crawling into the tent and piled up with rugs and blankets, sat hugging the solitary burning cresset and devouring corned beef and biscuits, the gifts of some kind friends at the Fort, a doubly dry morsel which it needed much wine to carry to its destination. The customary cigarette followed and we then threw ourselves upon the ground to fight for sleep till midnight, but after that the unequal contest was absolutely relinquished, as the temperature was not only so low, but the cold was rendered unbearably intense by reason of the violent motion of the air. At day break I jumped from the earth and soon had one man collecting firing, whilst the other was despatched to seek the mules. The *madrina* and three of them had cut their wisdom teeth and never strayed during the night, but the other two were lost to sight, and as the *arriero* had let them loose contrary to my expressed wish, my humour was none of the most amiable. A fire was soon kindled and meat put on to roast, every moment expecting the muleteer to return with his charge, but as he

did not make his appearance, the other peon was posted off to the brow of the gully above us to reconnoitre, but without result; so my mule was at once saddled and bidding him take the *madrina*, we started in pursuit of the missing driver and the brace of truants. After proceeding about a mile, we encountered him on his way back; for a league and on foot, he had followed the tracks of shod mules, but as snow had frozen on them, was unable to distinguish whether the animals were loaded or not, and so on arriving at the *Casas Coloradas* he had the mortification to find that they were due to a troop that had passed during the night from Santa Maria. The sun was just peeping over the hill tops as I then set off over the mountain summits in one direction and sent the men in others, and after working round in a circle for a short time, had the satisfaction of discovering traces of the fugitives; these I pursued diligently only to miss again as the ground became covered with loose stones; but still maintaining the general direction in which they at first pointed, I continued pressing forward over the mountains away from the road, rounding their tops, then calling one of the men after me with the *madrina*, we shot across some grass lands, every now and again approaching the edges of clefts to survey the valleys beneath. Very cold work we found it even on replenished stomachs, so that once, when my girths came loose, on dismounting I was quite unable to tighten them again until after some minutes' exercise. For a league the chase was continued when on turning the brow of a hill, I had at

last the satisfaction of discovering the two errants calmly fraternising with a lot of other mules and horses in a valley below our position; so despatching the peon circuitously to drive them toward me, I took them in hand and soon had them pelting away towards the encampment; but even then so great was the difficulty of racing up and down the mountain sides, that we could only secure one, with which we had to rest satisfied until our return with more aid, when fully another hour was wasted in capturing the remaining truant.

The night before, our intention had been to pursue our way to the mines, principally in search of fodder, as none was to be had for more than sixteen leagues ahead, but as it was now very late in the day, but clear and fine although cold, with ice on the pools by the rivulet side, we judged it more advisable to push on as fast as possible to cross the *Campo del Arenal*, a vast sandy desert without a particle of water or herbage, which lay directly in front. So starting down the quebrada a mile or so we gain a glimpse of the mines high up on our left, revealed to view by large patches of vivid green carbonate of copper thrown out from the mines as refuse, over which the mountain streams coursing, glide down the quebrada to dye deeply the multitude of bones scattered all over the sandy plain at our feet. Here an insignificant rill issuing from its rocky bed forms a pool called the *Agua del Chileno*, at which we gladly fill our barrel and then renew the journey, descending a few hundred feet to reach the precipitous ledge of the hills, whence a

peculiarly striking and bold but uninvitingly barren landscape arrests the eye. On each side mountains open out radiating in chains directly from us: in the distant foreground, a lofty hazy mass, extended at right angles to our path, forms the extreme boundary [of the barren desert plain about to be crossed; whilst again, a series of low transverse but dark weather-coloured granitic hills directly in our front and about two leagues off, offers a natural breakwater, against which unceasingly dash the mobile sand-billows that, driven before the winds, invade the hollows and quebradas of these semi-detached heights with masses of whitish glistening particles; the sand-whelmed protuberances however interpose no obstacle to our view beyond, where lies the desert proper, an intensely bleached sabulous ocean. Down the rough rocky glacis we bent our steps for two leagues to reach the level of the plain which we found covered with large loose stones, interspersed with a few shriveled shrubs here and there, guarded by numerous gigantic *cacti*, and on reaching the detached hills, which proved to be from a hundred to two hundred feet in height, just as we were passing the last after meandering among their bases, up rose a leash of guanacos with their elegant forms outlined against the sky at a distance of 500 yards, nearer than which they allowed no interview, and presently dashing off at their peculiarly graceful trot, soon breaking into a canter, these long-necks were quickly *hors de vue et de danger*; and so disappointed of our prey we debouch upon the wide,

wide waste sown with the deep, comminuted fringe of ages.

It was now 3 p.m. and the animals exhausted and hungry, having had no food the previous night, could scarcely sustain the labour of dragging their weary limbs through the heavy sand, whilst the strong wind blowing the parched mountain-dust into our faces, so that we could scarcely see, dried the skin and rendered it painfully tense, so that soon a halt was called for three hours to unload and rest the mules, until the sun went down, in order to push on all night by the light of a waning moon. Up we piled the baggage to keep off the hurricane which seems to blow continually across this desert from the south in the morning, and from the north in the afternoon, leaving distinct ripples or waves in the sand to testify to its constancy. The mules were let loose for a roll and to pick up what they could from the scanty stunted plants and having made a fire with a dwarf saline shrub called by the natives *cechijujú*, we soon sat down to a frugal dinner of roast, bread and wine, and whilst the others were enjoying a post-prandial siesta, seated on the ground with my back against the sheltering luggage, and a wine cask stuck between my legs for table, I busied myself with making notes of the journey from the Fuerte; but after writing a little, I had to give it up, as the fine sand, laden with sharp mica particles and driven with excessive force by the blast, completely blinded me.

Now, close to our encampment there rose abruptly from the plain two or three detached py-

ramidal hills, one behind the other, so that the whole scene might have represented a panorama from Egypt: the nearest of these excited my curiosity, and having aroused my assistant from his slumber, we proceeded to climb its abrupt ascent of 150 feet. As the plain on which we stood lay at an altitude of 5,250 feet above Andalgala, we now towered 8,325 feet above sea level, and when the gusty gale permitted, were rewarded with a fine prospect.

On our return the mules were collected and saddled and just as the sun descended below the horizon we started and for half an hour proceeded onwards tolerably calmly, when the wind suddenly changing to the north and blowing in our faces a very strong and bitterly cold blast, so benumbing that we had to dismount and strip the saddles to clothe our bodies, the very sand on which we stood sending its piercingly frigid rays through and through our boots; and so no longer able to hold the bridles the animals unguided were allowed to follow the *madrina*. A heavy Bradford rug enveloped my head and face, and what with its weight and the pressure of the breeze, a violent headache soon resulted. In the pale moonlight we traversed the silver sand dunes which, scintillating like so many *ignes-fatui* shed a weirdlike halo over the sepulchral scene, that the howling winds impressed upon our semi-animate senses. Persevering in our course until 11 p.m. I then called a halt, as endurance had almost reached its limits; so completely exhausted were we with the severity of the cold

that to speak was out of the question everything was done by dumb-motion, nay even to bend a finger to fix the tent was almost impossible; therefore to prevent something more serious overtaking the party, it was thought wise to rest awhile, although in that dreary spot, the animals could procure nothing either to eat or drink. A morsel of bread and a draught of wine sufficed for our meal, and then tumbling head first into a heap of wraps, a sleep resembling that of death overtook our weary frames; yet scarce an hour elapsed 'ere I became aware of the thud of a horse's foot-falls in the deep sand, when springing up and grasping a revolver, at the same time ordering the others to man the guns, suddenly the figure of a man on horseback was projected on the tent and well it was for him that my challenge evoked an instant and friendly reply. Our party consisted of some of the drowsiest mortals it has ever been my lot to keep company with; but as I possess in an extraordinary degree such quick hearing that, no matter how fast asleep, no sound escapes me in the night, reliance was placed on that accomplishment so invaluable in a traveller, and the unfair strain soon told upon my nervous system. The fresh arrival had passed within a yard or two of the prostrate arriero who, deaf to call, lay coiled like a bundle of rags in the open air, as his custom was, irrespective of weather wet or dry, cold or warm; and was on his road to the mines six leagues distant, a solitary midnight ride we did not envy; so uttering adieus in various tones of the somnolent gamut and giving one huge turn,

we surrendered ourselves to the sleepy good until the maximum frigidity preceding daybreak permitted no further indulgence, and the muleteer was roused to seek the animals that had been let loose the night before.

On touching the naked sand even with booted feet, its intensely low temperature struck through the leather and numbed the nether extremities insupportably: indeed ice would have been preferable to this gelid sand-bath which always in extremes of heat or cold afflicts the wayfarer. As we now sat round the fire awaiting the arriero's arrival and regaling our olfactories with the sniff of a four-o'clock roast, for food is never unwelcome to the nomad at any hour of the day or night, our attention was strongly excited on witnessing the distant mountains on our left touched as to their summits by a golden flood which, rapidly descending their sides, coloured the desert and approached our encampment with giant strides: on this and other occasions I quite forgave the Incas their worship of the sun.

As the man in search of the mules had been absent more than an hour, I began to be uneasy on his own account, as well as that of the animals, and so we left the tent standing as a landmark; but at last, and long before he was visible, I heard the madrina's bell, the unerring herald of an approaching caravan, and in about a quarter of an hour the arriero made his appearance, bringing in his train the complete equipage which he had tracked for a long distance.

The solitude of this wilderness, irrespective of the suffering it entailed from heat and cold, was to me quite oppressive, yet it possesses grandeur which is especially appreciated when viewed for the first time and under the favourable circumstances of moonlight and dawn, which it was our good fortune to enjoy; but at midday, so extremely high is the temperature as to banish all susceptibility to beauty, and render the traveller dead to all other instincts but that of delivery from its scorching Simoom.

We were soon again in the saddle, heading more or less north for the entrance to the valley in our front: but little animal life was visible; one chimango, a fox, three guanacos and a few calandrias (*Mimus calandria*); whereas the records of the dead were more numerous, monuments not less instructive than the pillar of salt of old, skeletons in all positions, not a few with the skins dried entire on them, and one, of a mule propped up against a bush of hard, thorny plants, with its legs in the act of pawing death, realized life in all but the vital spark.

As we approach the *punta* or jutting point of the mountains, by which we enter the valley where arrangements have been made to rest at some potreros on an estancia, we obtain a view westwards, though very distant, of lofty masses with yellow patches dotted over their summits, these are evidently the remarkable sand-glaciers; whilst closer to us lies in the same formation a huge accumulation of sand driven up by the force of the wind into a sort of

bay in the mountains, extending some leagues in length and rising quite a thousand feet. Directly in our front some scattered hillocks form an *avant-garde* to their more bulky brethren and passing these, a little further on we enter the valley and behold a river of sparkling water, the Santa Maria, a most refreshing sight alike to famished beasts and their exhausted riders, after the long, dreary, sandy waste through which we had travelled.

It was now about 3 p.m. and having accomplished ten leagues since early morning, we fortunately lighted upon the estancia, abounding in potreros of alfalfa, and supplied with a few scattered ranchos for the peons, belonging to a gentleman in Santa Maria, so there was no difficulty in obtaining pasture, and after allowing the animals a good drink in the stream, we turned them into the fat enclosures, and at once sprung our tent in the *corral* adjoining one of the shantees, and whilst our dinner was cooking, the crystal waters invited the pilgrims to a superb ante-prandial bath.

Next morning *diluculo surgere* was the motto, and on proceeding to pay for the fodder, I had to receive one real change, but as small money does not exist in these regions, that was accomplished by cutting a *Chirola*, a Chilean silver coin worth about a franc, in half; in fact, these halves, quarters and eighths accumulate upon the traveller to an alarming extent in the north of the Republic, and produce a monetary system very much resembling the Chinese or Japanese; but as the Mint is now hard

at work in Buenos Aires, this inconvenience will no doubt soon be obviated.

We now started along the valley to reach Santa Maria, a distance of eight leagues, which proved a very uninteresting and monotonous route, sandy and shingly, covered with brushwood interspersed here and there with Algarrobo trees, but as usual presenting few or no signs of animal life, a fact that struck me forcibly throughout my wanderings northward. Five leagues brought us to a town called San José, where passing along a road lined on each side for more than a mile with potreros all enclosed with *tapias*, and a few scattered houses we at last entered the Plaza, a fine open space with a church on one side, and thence traversed the principal street, consisting of three or four squares of dwellings, a spot crowded with men, mules and horses. The concourse surprised us, as we had actually forgotten it was Sunday, on which day it is the custom in every part of the republic for the *paisanos* to crowd into the pulperias and almacenes for the purpose of drinking; but on this occasion the scene partook of a military character, as the yokels had come in first to drill and then to tipple, and strong mounted patrols with fixed bayonets and swords were searching every hole and corner for absentees from duty. About a mile beyond the town we halted for breakfast at the house of a friend of our arriero's, and unloaded the mules to allow them to partake of the rest also; and three leagues hence reached Santa Maria, proceeding most of the way through culti-

vated ground, succeeded, on nearing the holy spot, by vividly green alfalfares studded with remarkably fine old timber and portioned by neatly kept *tapia* walls at equal distances, with a back ground of mountains which here do not present so sterile an appearance; in fact Santa Maria bears the stamp altogether of a prosperous and picturesque township. On entering its precincts and applying at a corner house, we found they had pasture, so we at once stopped and the owner, a gentleman named Manuel Gomez, the chief of police for the department, came out to bid us welcome and kindly allowed us to occupy an empty room overlooking the street, besides supplying furniture, lights, water and fuel, luxuries whose use had grown unfamiliar. As at San José, so here, being Sunday, all the almacenes were full of men drinking; but at dusk this active police officer* terminates the orgy by sending round and closing all the dramshops and turning the bacchanalians into the street to avoid quarrels; an act considered by them arbitrary, but very beneficial to the general welfare. Santa Maria possesses only a single principal street of three or four squares in length, which forms in fact the high road; and here we remained two days to recruit the mules, but were unsuccessful in adding to our natural history cabinet, although we took our guns down to the swamps in the neighbourhood of the river; but further away from the town, on its

* The power such men obtain over the *paisanos* in the interior is simply wonderful, and reminds one of the times of the feudal chieftains.

opposite bank and towards the mountains, lies a *laguna* of considerable extent, a rich hunting ground, which however I forbore to visit, as horses are necessary to reach it and I did not wish to break the rest and feed of our own.

The valley in which Santa Maria lies varies a good deal in breadth, and along its whole length, as far as Las Conchas, is subject to troublesome winds, especially violent at this season of the year, so that the town, which inclines to its western border, stands in danger of sharing the fate of much of lower Egypt; as it is, the sand is blown in heaps all over it and invades the dwellings, so that it is next to impossible to keep the place clean. A few leagues distant, on the mountains, occur the ruins of an old Inca fortress and town, whence numerous relics, chiefly of potteryware, are obtained, but unfortunately I had no time to visit them.

Next morning our animals, knowing when they were well off, turned restive in the potrero, and refused to be caught, so we were obliged to call in native aid, and at last getting off and passing through Santa Maria, took to the river bank, which we found to be skirted with timber of fine growth, chiefly quebracho and algarrobo.

About three leagues north of Santa Maria, the province of Tucuman injects a narrow strip of its territory between Catamarca and Salta, which lay directly in our path; so crossing the frontier line and scampering over the ten leagues' constricted neck of the neighbouring canton, we land in Salta only to find a park-like scenery in utter con-

trast to the sterile sandy wastes over which our weary steps had lately conducted us. With what delight did we hail the thickets, interspersed with patches of perfectly even meadow clothed with fine short sward, the clusters of magnificent timber, nay even the thick jungle which succeeded, consisting of lofty, thick, coarse but very brittle herbage, and high enough to conceal us on horseback as we threaded its narrow track in Indian file. About 3 p.m. we sighted our goal for the day, an estancia named the Bañado, from the swamp which here runs for some distance along the valley; and on arrival, great was our surprise to witness a large and well-regulated establishment, ready to greet us, owned by a gentleman in the city of Salta. The house, a very extensive building but almost entirely unoccupied, nevertheless has a capacious patio, the secure nightly refuge for an immense flock of poultry, such as, peacocks, geese, ducks, pigeons and fowls; and such a cackling, screaming, crowing and quacking, I never before heard. In this deserted mansion, tallying well with Pope's description of an ancient English country seat, the mayordomo allowed us to occupy for the night a room bare of all other accessories save Arachne's hangings, and a real benefit it proved, as the high wind rendered the exterior air choking with sand and dust.

As twelve leagues were the quota to be accomplished on the following day in order to reach Cafayate by nightfall, we rose betimes and proceeded on our way through scenery much the same as

before, although the timber, identical in species, but generally bare of foliage at this season, certainly attained a finer growth, and now mountains skirted each side of the valley, which is more or less meridional in direction, and along which our road winds. The dearth of animal life is however remarkable in these woods; two or three small birds hopping about among the lower branches, a solitary carancho or chimango evidently oppressed with *ennui* lazily flapping its extended wings overhead, and now and then a stray donkey as it deliberately turns its head munching, to interview the intruders, comprehend the only visible representatives of nature's catalogue, although on the neighbouring mountains the guanaco still is, and the vicuña formerly was, hunted. Yet, although inferior life seems somewhat to desert these parts, the roads are here tolerably thronged with mounted passengers, the women invariably wearing men's felt hats as a part of their riding costume; whilst troops of mules, some laden with empty barrels, others with full, on their way to and fro between Salta and Catamarca, indicate the thirst that exists northward for the vintages of the south; meanwhile from this point, the broad, dusky, but not unpleasant Indian features become more pronounced, and with them is developed an acuteness in business transactions bordering on Yankee smartness. A feeling of sadness however oppresses the spirit on beholding the multitude of wooden crosses which line the roadside until past Cafayate, some of which, two or three feet high and unsupported, others nailed to

the nearest tree, remain as historical land marks, telling of unsettled and troublous times.

Three leagues from Bañado, we passed through a village rejoicing in the euphonious name of Colalao, where commence the vineyards, and there the ranchos and small houses, generally built nestling under the spreading branches of a fine algarrobo tree, are constructed entirely of coarse long grass, sedge and reed, which serve to indicate the tropical nature of the climate. It was a feast day and as we passed through the small lively plaza, numbers were hurrying up to the little adobe church, from whose single turret a solitary bell sprinkled the air with holy sounds and reminded us of a duty which travellers much neglect, although of all others they are the most dependent upon a superior power. In front of the few almacenes were ranged numerous horses all decked in their best trappings, whose owners now at their devotions, soon return to spend the remainder of the day in drinking, after which they ride home as best they can ; and it is no infrequent sight to pass on the road men lying beneath the trees, sunk into a drunken sleep, guitars by their side and their faithful steeds standing guard over them with drooping head and ears, as if they too were exhausted with the previous day's revelry.

A very remarkable circumstance in connection with Colalao, which the inhabitants attribute solely to the malevolence of a small river flowing down a quebrada in the mountains, and distant about a league, but which I am inclined to ascribe to vol-

canic agency, especially as the traces of such action are visible in the neighbourhood, is that every seven years a flood of sand and mud descends in sufficient quantity to cover the land and even invade the houses to the depth of seven or eight feet, and of this I had ocular demonstration, as on some of the vineyards no more than a foot or so of the tops of the vines were visible; but for the well-known periodical recurrence of this curious terrene inundation, I am completely unable to account.

Before reaching Cafayate at 5 p.m., we passed through another village called Tolombon, and although somewhat out of our route to make a detour by Cafayate, on the western side of the valley, as a track led by a short cut across it to the quebrada on the eastern side, we were induced thus to turn aside as Cafayate is a place of some importance and provided with good pasturage; on approaching which, amongst the usual potreros and a few straggling houses, our eyes were gladdened by the sight of a carriage full of ladies coming towards us on their afternoon drive amongst the country lanes. The fashionable turn-out refreshed our view with a glimpse of returning civilization, after having rested so long on dreary, solitary landscape; and as we entered the town, a very neat and well-kept Plaza with its poplars and willows, grass plots, and spacious church, arrested our attention; and all the more so when we learned that the whole of the adornment of the site was due not to municipal administration, but to private munificence, the result of a subscription raised for the

purpose. Indeed Cafayate with its 2,000 enterprising inhabitants impressed me with its very progressive tendency, what with its vineyards of delicious wines, silk culture, wheat fields, plantations of rare shrubs and European forest trees, and extensive irrigation works, somewhat on the Mondoza plan. In our pursuit of pasture, we luckily fell in with the manager of the estancia at Bañado, where we stopped the previous night, and he at once took us to the large establishment here belonging to the same owner, and provided our animals with abundant fodder and ourselves with an empty room.

The next morning at daybreak we proceeded to cut straight across the Calchaqui valley in a direction almost due easterly, in order to enter the quebrada that runs through the chain of Los Quilmes and leads out into the valley of San Felipe de Lerma, in which lies the city of Salta; and after having crossed numerous swamps, on our passage to the mountains, five leagues brought us to a place called Las Conchas couched just behind a small outlying hill, and as we drew near it, the varied aspects of the mountain faces were a matter of surprise, as instead of the customary dark-brown, barren appearance so common in this country, they presented the novel spectacle of strata of different coloured rocks, red, white, blue, green and black, interspersed here and there with bright yellow patches. Here passing a small mill, we ascend slightly and round the base of a moderate eminence that blocks the entrance of the quebrada,

and which presents a peculiar natural phenomenon, as it is composed of dark-red clay and honeycombed with numerous caverns, and so waterworn as to imitate domes, minnarets and all kinds of fantastic shapes, a Brighton pavilion which the fancy refers to the age of troglodytes and peoples with races long since vanished: again, descending awhile we find ourselves at length amid cultivated fields and a few scattered dwellings which go to make up Conchas, a snug little place nestling in a mountain bay. Here after some little trouble in finding pasture, we fell heirs to a small disused store, with mud floor, a counter of the same material and a few wooden shelves, where we managed to stow our cargo and then proceeded to breakfast; for having arrived early after a short stage of only five leagues, we thus enjoyed half a day's leisure for refitting, repairing, overhauling and curing the sore places of the mules, whilst I wrote up my notes. In the afternoon a bath in the acequia that runs through the potreros refreshed our weary limbs, and on the morrow at the usual early hour off we started as quickly as possible, as a stage of twelve leagues intervened between us and the nearest pasture ground, although two or three poverty stricken ranchos were met with on the road. Taking a last, fond, lingering look at the valley before we quitted it to enter the quebrada, at the embouchure of which lies Conchas, we view it stretching away as before far to the north, as it lies in the direct road to Bolivia, besides leading to Cachi and those dry regions referred to in the first volume, whose

mighty mountain ranges shoot up so boldly in the hazy distance.

We then plunge into the pass to find a stream of water meandering down it, which has to be crossed and recrossed continually; the ravine, tortuous and highly picturesque, at times narrows to a hundred yards, at others opens out to half a mile, its sides and lower immediate heights still maintain the same stratified appearance of multicoloured rocks, but the mountains in the back ground contrast by the darkness of their hue. A halt for an early breakfast was called, and while it was in preparation, we were struck with admiration at a mass of *cirro-cumulus* cloud of some miles in length that, peeping above the frowning summits of the lofty range, just curled over the tops and there remained stationary as a dazzling white, wavy frill; evidently the effort to rise to that height had exhausted the power of the flocculent cotton wool, and it therefore resolved to adorn what it could not altogether surmount and eclipse.

About three leagues down the quebrada we reached a spot termed *Las tres cruces* (the three crosses), and here in order to save distance the road ascends the face of a hill, passing through a small cleft at the top, and on the summit are the three crosses to mark the site where a similar number of travellers were murdered a long while ago. No native ever dreams of visiting this locality for the first time without depositing a cross and swelling the already massive heap that testifies the dread which the cross-roads always inspire. Some passers

by more superstitious than others descend to erect a cross, whilst others in whom the senses of superstition and religion are dulled satisfy their consciences by merely cutting a pair of twigs as they go along, tying them together on horseback and then tossing them on to the pile of some thousands, as they ride by. The *paisanos* aver that without this precaution, your animals will become tired, injured or lost; and indeed my arriero, full of faith in the rite, asserted that on his previous visit with a troop, having omitted to fulfil the religious ceremony, he was in consequence deprived of three of the number, and being unable to find them returned and in a paroxysm of zeal cut several crosses, when immediately after he had erected them, he succeeded most miraculously in discovering his stray mules. So when we were resting and repairing the previous day at Conchas, as a piece of Napoleonic policy, in order to gain the goodwill of the country people, I stimulated my followers into constructing a variety of crosses with more than usual care, and these we were very particular to erect on the sacred site and not merely throw into the vulgar mass, a proceeding which gave intense satisfaction.

Down the quebrada, which in many parts retained its picturesqueness, we hurried and just before sundown arrived at an estancia called Morales, after its owner, where a commodious looking house, surrounded by corridors and two or three *alfalfares* along the side of the quebrada, irrigated by the stream that traverses it, promised both lodging

and provender: but although we begged for pasture and felt sure of receiving hospitality at a place whose name indicated the essence of good will, our request was refused, and so we had no other alternative than to trudge forward with tired animals three leagues further, in addition to the twelve already accomplished. With no good grace therefore and inwardly blessing the *im-moralists* above, we wrapped ourselves up and forwith urged the enduring beasts to a trot in the twilight, until on arrival at the Curtiembre or Tannery, where after some trouble good pasture was secured, our tent pitched and the larder ransacked to provide a meal; the cupboard was bare however, as the peon whose duty it was to look after the flesh department had forgotten to lay in a stock, so the old four real stereotyped hen, kept on purpose for travellers, had to do duty, but although useful for soup the superannuated rooster turned out toothproof as usual.

Immediately after supper in we turned, exhausted by the long day's journey, and next morning continuing still down the quebrada, our path was beset by a different style of vegetation, more tropical in character, in the midst of which I shot one of those beautiful scarlet-headed wood-peckers the *Dendrocopus atricentris*. In our descent many specimens of the Palo borracho occurred, succeeded by natural plantations of the *Candelabra cacti*, fully fifty feet in height, and then the ravine expanding disclosed a few dwellings, after which we entered a most delightful bosquet of the tower-

ing Lapacho, a magnificent tree that, strange to say, presents a mass of vivid green in summer, but in winter, clusters of glorious bell-shaped flowers; mingled with its equally bulky rival the Tarco (*Jacarandá chelonía*), a medicinal trunk sacred to Venus, whose foliage, unlike that of the Lapacho, is not deciduous in winter, but remains to back up the flower. Soon after quitting these patriarchal stems, we stepped out into the expanded valley to breathe the free air of the plains, as the mountains, which had hitherto closely guarded our steps, suddenly deployed to great distances on either side, as though glad to wash their hands of us. After the confinement of nearly two days in a ravine, the change to the open was hailed with delight, for however picturesque scenery may be, if wanting in variety, it soon palls, and thus it is that travelling in this republic is rendered monotonous by the very extent of its features, everything is on such a grand scale.

Just at the mouth of the quebrada we encountered a party of ladies and gentlemen on horseback, the former so muffled that the eyes alone were visible, an Eastern practice here indulged in to save the complexion, but in Catamarca and other provinces, even in the streets of the towns, and especially in the country parts, it is the universal custom of the women to cover the face on the approach of strangers.

As we emerged from the ravine into the vast and fertile valley of Guachipas, two roads confronted us, branching off the one in a westerly di-

rection through the town of Viñas celebrated, as its name indicates, for its vineyards, the other somewhat to the east and leading to Guachipas; but as the latter place was less distant than the former, we chose the shorter path, in order the more quickly to supply our exhausted larder with meat and bread, and assuage the claims of hunger. Passing through well-wooded lanes, flanked by wheat fields, we presently arrived at Guachipas and traversed it with the intention of encamping on its further outskirts, where unloading by permission in front of a house, we sent forth a spy to reconnoitre and bring back from the town a supply of provisions, who, on his return, informed us that he had been detained by some gentlemen seated under a corridor of the principal house by the inquiry as to what we had for sale, as they took us for pedlars, being unable to link with the caravan any other motive than that of filthy lucre.

After breakfast, as we pressed onwards through pretty winding lanes, we were completely astonished at the profusion of wheat fields, vineyards and orchards, which everywhere met the eye, the richness of the valley being the direct offspring of the river Guachipas, which flows directly through it, and is afterwards known as the Juramento and subsequently as the Salado. Some scanty woods of Molle (*Lithrea Gillesii*), Mato (*Eugenia Mato*), Tipa (*Machærium fertile*) &c., now intervened, and after two or more leagues, on our arrival at Sauce Redondo, where commences an extensive swamp, we pulled up at a house with an orchard attached,

belonging to an aunt of my arriero's; here our tent was soon erected and then surveying the land at leisure, we were both surprised and delighted at the number and varied species of birds whose habitat we had invaded; in this respect contrasting favourably with the previous part of our journey and giving rise to the reflection that the feathered tribe, any more than man, cannot exist without wood and water. Sallying out with my gun for a few minutes before dark, I obtained several birds, amongst which were the *Ardea Nycticorax* and the *Penelope guttata*, but what most attracted my attention was a species of Woodpecker the *Leuconerpes candidus*, with black back, white breast and head, and a light yellow patch on the thorax and round each eye. These hoary-headed sedate birds go in families and pass up a tree from the root to the very top of the stem in corkscrew fashion, in a single slowly-moving file, each head touching the preceding tail, a movement that becomes highly comical to the beholder; in fact, the habits of the woodpeckers in general are peculiar throughout the extreme north of the republic.

Before sunrise on the following morning, our tent was struck, the cargo packed and a start effected through low swampy ground alive with feathered bipeds, but mostly of families well-known in Buenos Aires, especially the *Tyrannidæ*; and although to delay was tempting, I thought it more prudent to push on to Salta, as the bad weather was approaching, and the dreaded Chuchu combined with swollen impassable rivers to bar our return,

formed a doubly-barbed goad ever inciting us to exertion.

Arboreal life of fine growth had now left us for a time, to which shrubs and creepers in innumerable variety succeeded; one of the latter, the *Bejuco*, whose use was first made known by the Chaco Indians, deserves notice as a sovereign remedy for the bite of venomous serpents; the elegant *Papilio Thoantiades*, the only pretty butterfly as yet noticed since leaving Andalgala, here put in an appearance; and then, as we were hurrying along a road with lofty hedges formed of dry brushwood that had been cleared from the land to leave exposed the naked stems of copse-like forms, urged by curiosity I happened to rise in the stirrups to peep over the prickly fence, when to our mutual astonishment my eyes met those of a beautiful fawn, and before I could steady the mule to bring my revolver to bear, off it bounded to leave only a trace of its existence on my retina. Soon after we debouched upon undulating ground covered with fine timber, very much resembling an English park, and containing amongst other magnificent trunks that of the Tareo in great abundance, a tree far superior to the noble *Araucaria*, as it exhibits both leaves and flowers simultaneously; then passing through a forest of lesser growth and ascending some hills whence the view was extremely picturesque, we arrived at Osmos after completing a stage of eight leagues but entirely devoid of monotony.

Once at Osmos we stopped at the estancia of a native gentleman, situated on a kind of small

plateau surmounting hills of moderate altitude, a very romantic spot. The house, surrounded completely by a verandah, has a vinery running up to the front door, a well-kept garden enclosed with green palings, and an aviary of many cages filled with different species of song birds. In front is a clear space through which the highway passes, and on the right are extensive, neat and well-built *corrales*, whilst rearwards discloses a most ravishing landscape down below, as hill upon hill rise and fall in swelling lines, interspersed with pasture fields of the deepest green and intersected by hedges of lofty trees, whilst distance lends enchantment to the view by revealing towering azure mountains; in fact, look which way you will, the eye is transported by the fineness of the prospect.

On the open space in front of the dwelling arose our tent, and as the estanciero was absent, an arrangement was effected with the capataz for pasture; but just as we had reduced chaos to something like order, up rode the host himself accompanied by his wife, both splendidly mounted; a speedy invitation to dinner ensued which I was forced to decline as involving thorough ablution and dressing, but I was not let off for coffee, so, tired as I was, I had to renew the outer man and spend the evening with the family, amid much music and conversation. This gentleman owns a large tract of land in the neighbourhood and lives much the same patriarchal life as a fine old English Squire of the last century, being an authority on agriculture. He told me he was endeavouring to people

his estate by building dwellings for the tenants, but that there was a great dearth of labour. On this I enquired why he did not try to entice some of the thousands of immigrants that land on these shores, but the reply was that a prejudice exists against the class, as it is believed that all the good ones meet with ready employment in the neighbourhood of Buenos Aires, and only the refuse would consent to such a distant journey northwards; and as an unfavourable bias, when once bred in this country, has all the force of fact and becomes invincible, I said no more upon the subject. Whilst we were sitting outside, in the front corridor, conversing upon the future of this part of the republic, our hostess approached accompanied by one of the servants bearing in one hand a lighted candle, and in the other a can of kerosene; they went the round of the garden, carefully inspecting every plant to see if the destructive black ant was at its work of depredation, and this was their usual evening occupation, for if they allowed the *Formicidæ*, *carte blanche* for even one night, not a leaf would be visible at sunrise.

Next morning we were up betimes and to our surprise met a posse of Bolivians who had come down all the way from their own country with a troop of mules, to fatten them for a month in this rich district: then saddling to finish our journey as far as Salta, distant from Osmos twelve leagues, and where we hoped to arrive the same evening, we descended the hills to pass through a well wooded region, intersected by the dry beds of numerous

rivers which we had to cross, and soon arrived at Carril a town four leagues from our starting point. Now this Carril is a lively and picturesque little place, with several houses of a superior class furnished with corridors and beautiful gardens, in one case filled with beehives, and a few good shops; and no small gratification was it to the dust-laden and worn travellers to behold fair ladies, fair as our own countrywomen, but with tresses far more luxuriant, as seated cozily and securely beneath the corridors they plied the needle or busied themselves in other domestic employments, a glimpse of civilization common enough in Europe, but here very rare.

The road further ahead however became uninteresting, although several hamlets and straggling dwellings appeared, but nothing occurred to excite remark until our arrival at the fine mill, called the *Italo-Americano*, which, standing by the roadside and built by the Messrs. Campa in 1875 at a cost of £10,000, is really a fine structure, elegantly finished, and presents an imposing entrance guarded by two life-size statues erected on the gateway posts. To the exterior grandeur correspond the interior fittings; but we were scarcely prepared to find within, a master-piece of machinery, brought from the States at enormous cost, which when in gear with the hydraulic wheel, suffices, with the aid of only two men, to take out from the deposit from six to eight tons of wheat and in 24 hours to deliver the whole as flour ready sacked and weighed. After leaving the mill, we soon caught sight of Cerrillos, in the valley of Lerma, distant only four

leagues from Salta, between which two towns a diligence plies; and as this district is strictly devoted to agriculture, considerable quantities of sugar, maize, etc. are raised, but owing chiefly to its elevation of 4,000 feet above sea-level, strong frosts not unfrequently destroy the harvests; here too amongst the calcareous hills, several lime quarries and kilns were observed.

The important town of Cerrillos is picturesquely situated and altogether presents features of a more tropical character than hitherto, as each house is fitted with a spacious corridor open to the road, telling of great heat, which however does not appear to enervate the inhabitants, whose animation in street and store is very conspicuous: but as we were anxious to arrive at Salta, no time was lost in loitering amongst the pleasant little hills, and so the journey was continued and otherwise rendered agreeable by passing through a region highly cultivated but devoid of timber. Urged at last by the pressure of thirst, we pulled up at a small wayside store, where our sight was refreshed by a multitude of glasses encircling a huge earthenware jar, the whole mounted on a table covered with a snowy cloth. A long straight reed fixed into a hemispherical half-gourd, did duty for ladle, and I began to wonder whether we had stumbled upon cherry brandy or not, when upon enquiry, the amphora was found to contain *Aloja de maiz*, a very refreshing, cooling, slightly acid and spirituous, but not too sweet tippie, made by boiling the corn and then fermenting it. A teaspoon-

ful of molasses was first introduced into each glass, then the long-handled bowl, plunged into the mother liquor, brought up as well grains of maize, some of which placed in every tumbler served to render the resemblance to cherry brandy something more than fanciful. The custom is to eat the maize first and then consume the beverage and very palatable it was, at least such was the judgment passed upon it by the parched throats that thronged around that table.

Whilst I was busy drinking a few glasses of this cheap roadside nectar, my arriero was bustling about the locality looking for pasture, which he ultimately found; and on extensive premises adjoining the store where we stopped, permission was obtained to unload and encamp, which we did just inside the entrance gates on a road leading up to the house; but as on raising my eyes and directing them northwards, the white domes and towers of the city of Salta were visible in the distance, not more than a league off, the temptation proved too great to be resisted and I determined forthwith to visit it; so taking some personal luggage on a baggage mule which the arriero drove, whilst my assistant and the other peon remained to guard the camp, we set forward, and on nearing the goal were surprised to be confronted by low marshy ground over which the road, carried at a higher level, is flanked on either side by deep ditches, whose earth piled as a rampart at each edge, and covered with sods, gives to the whole somewhat the appearance of a railway embankment. The soil is not culti-

vated but yields a rich pasture, intersected by a very intricate network of deep drainage works, whose open canals are a standing menace to the health of the town, especially on account of the frequent inundations that occur; and here and there, as the sight wanders over this lesser Egypt, a few miserable ranchos may be discovered scattered about its humid surface.

After crossing the river Arias by an excellent wooden bridge, we were suddenly introduced, at one and the same time, into the outskirts of Salta and the presence of a customs' officer, who enquired whence we came and the nature of our cargo; but by the use of the *suaviter*, which forms the indispensable *vade mecum* of every traveller in this republic, we escaped paying the tax called *derecho de piso* (toll), and forthwith deviating to the right for about a square, emerged into the principal street, many squares of which were traversed before we abruptly turned down a short distance at right angles, and stood in front of the principal hotel, the object of our search, situated about a hundred yards from the chief plaza.

CHAPTER XLVI.

1,200 MILES UNDER CANVAS.

CONTENTS:—City of Salta—Reasons for and against present site—Salteñas very Gallic—Army of Crispins—Dr. Fontana the explorer—Argentine Plazas v. London squares—A delightfully complex monetary system—Sir Walter Raleigh's potato still in existence—Particulars of sugar culture—The Indian sweet tooth takes the gilt off the gingerbread—Devil's arrows—Devoured by peccaries.

The city of Salta, or San Felipe de Lerma, is a remarkably pretty but rather unhealthy place, owing to the exhalations from the neighbouring marshes on the south side, and the malaria from the circumscribing irrigation canals. Although stationed at an elevation of 4,000 feet above sea-level, it occupies the lowest part of the valley of Lerma, whereas northward the ground, rising continually into a sort of level plateau, ought in my estimation to have furnished a superior site. However, as in remoter times, a ditch, partly natural but now greatly filled up, seems to have encircled the present locality, no doubt the founders of Salta took advantage of this opportune ready-made fosse, even if they did not, as is generally supposed, construct it, as a protection against the Indians. Close to the

town, on the eastern side, runs a chain of hills of moderate height, but at a greater distance westwards, a range of lofty mountains. The city, which contains from fifteen to twenty thousand inhabitants, whereof the females, as in almost all the other parts of the republic, are in excess, surprised me intensely with its size, beauty and stir. The Salteño population, resembling those of Tucuman and Santiago del Estero, but containing in addition a considerable Bolivian element, forms, in the capital equally with the province generally, a very intelligent, laborious and orderly race, and one not so deeply immersed, as elsewhere, in political questions; the women especially reminded me of the French, as, in presiding over shops, keeping accounts and busying themselves generally in the lower ranks of commerce, they exhibited the tact and superior management so characteristic of Gallic wives. One extensive industry too cannot escape the observation of the stranger as he saunters through the streets and beholds the army of Crispins hard at work in the manufacture of boots, from native tanned leather, for the Bolivian market, and which are exported thither in immense quantities.

The streets of Salta are both paved and lighted, and contain many good shops besides three hotels, the best of which the *La Paz* offered me a temporary asylum. This hotel is really a fine azotea building, with an enormous folding gateway opening into three patios, grand entrance hall lined with lounging seats, four billiard tables, a

magnificent dining room, tolerable cuisine, abundance of ice and ice-creams in the evening, French cook and head waiter, but managed by a Swiss. Here it was I met the Dr. Fontana mentioned in the first volume, who with a band of forty men had just succeeded in crossing the Grand Chaco from Corrientes. Starting from the Rio de Oro, a branch of the Paraguay, he endeavoured to trace a direct line to Salta, but on account of the hostility of the Indians, by whom he was severely wounded and some of his men killed, and above all by the want of water, could not accomplish his design, and so to save the lives of himself and his men, he was obliged to deviate northwards to the colony of Rivadavia on the banks of the Vermejo.

The Plaza, which is surrounded on one side by the Cabildo, a two storey building bearing a public clock and throwing out a very old double recoba to the street, containing the Government house and Policia, and on the opposite by the Cathedral not yet completed, whilst a third is partly occupied by the National Bank, and the remaining one by the really fine and modern Normal School, has a beautiful promenade all round, shaded by patriarchal trees, besides numerous radial walks, lined with hedges of rose-trees and other shrubs, which lead to the centre where stands the customary obelisk, a very pretentious polyolith, around whose base the band plays twice a week to entice the *élite* of Salta to promenade amid the perfume-laden flowers that adorn the site; and I never visit these Plazas which are the centres of attraction in all

Argentine towns, without the thought occurring to me that something of this kind might be attempted in London, to render inviting or at any rate somewhat less oppressive, those frowsy, closely-barred, dismal dens yeleft squares, which at present are a refuge only for a few caged nursery-maids, antiquated sparrows and prematurely miserable elms.

Although the houses in general have only a ground floor, enclosing patios filled with gay flowers, many are storeyed; the churches are numerous, monasteries, convents and charitable institutions abound; and a public market aids domestic economy; at present, the water supply, obtained from the current of the river Arias, as that from wells bears a noxious character, is hawked about the streets, but water works are projected; so that altogether the wants of the Salteños, both spiritual and temporal, are by no means ill supplied.

In my search for society, I found two or three Britons resident in the city in whose company the time passed pleasantly; the chief of whom was Mr. Fleming, a druggist of high renown, who never fails to play the part of the true Samaritan to English travellers; besides these, there crossed my path a waif in the shape of an Irish doctor on his way to Bolivia, a Porteño chemist of the name of Day, a distant relative of my kind friend of the same name in Mendoza, and lastly an American dentist whom I had formerly known in Buenos Aires and who, by looking into the mouths of the native ladies, had already accumulated a fortune. One circumstance however, that dimin-

ishes the pleasure of wandering in this district, and must certainly militate against the extension of commerce, is that throughout the province the monetary system remains in a delightfully complex condition, as each municipality issues its own notes, which are not current in any other locality; so that after having received change in Cerrillos, but four leagues from the capital, upon arrival there I found it impossible to negotiate it.

Notwithstanding the beauty of its immediate site, the only pretty suburban road I could discover, was one which ran westward, well paved but narrow, leading to some baths* and tea gardens, amid a very luxuriant vegetation; but a distance of eight or ten leagues are several well-wooded villages of exceeding picturesqueness and fertility, such as Campo Santo eight leagues to the east, where coffee, sugar, coca, and rare fruits like the luscious Chirimoya or Custardapple (*Anona Humboltiana*) are cultivated: yet it is a curious fact that the real original potato, a small reddish looking bulb no larger than a walnut, as taken home from Chili by Sir Walter Raleigh, is the only one still in use in the province of Salta, as the little European seed that has as yet reached that distant part quickly degenerated.

The cultivation of sugar is here attracting great attention, although immense tracts of land highly suitable for its production are still lying

* Indeed the sulphurous and acidulated springs of this province are very remarkable, especially those of Rosario on the frontiers, whose analyses will be given subsequently.

idle, owing chiefly to the want of capital; in fact, only about a thousand acres principally around Campo Santo are at present under cane, and which in 1880, a very inferior year due to absence of rain, yielded 440,000 lbs. of sugar, worth about 7*d.* a lb. in Salta, 87,500 lbs. of roots worth 2½*d.* per lb., 129,375 lbs. of molasses worth 1½*d.* per lb., and 2,050 barrels of spirits of wine of the value of 4*d.* the Spanish quart. Eight mills are at work, two employing the *vacuum pan*, and the others *direct fire*, purifying the sugar in burnt-clay jars; the new system however quite doubles the yield of the old. The cost of cultivation per acre is £2 15*s.*, and of manufacture £6, but as Mataco Indians from the Chaco are employed in the labour and they bring with them their numerous families, to the bare wages must be added the seriously expensive item of the consumption of these children of the desert, which amounts to close upon one-fourth of the produce, and that only in the four months of harvest. In an expedition to the Gran Chaco undertaken by Arias in 1780, the sugar cane was discovered growing wild, and it was observed that the Indians strictly avoided even touching what they called the "Devil's arrows"; they have evidently survived their superstition.

During my stay in the city, which lasted but one week, I presented my letter of introduction to the governor, who received me very kindly and promised to obtain for us free passages down to Buenos Aires in the government exploring steamer,

which was about to arrive at the colony of Rivadavia, the highest point as yet reached on the Vermejo, and distant about 150 miles from Oran; but the vessel unfortunately never put in an appearance, having been wrecked by one of the innumerable shifting sandbanks, on its voyage up a river, the most inconstant ever known.

The whole province of Salta struck me as essentially rich in minerals, and especially adapted for the cultivation of cotton, rice, coffee and sugar; but the fauna I had but little leisure to investigate; on the mountains are inexhaustible herds of the guanaco, but the vicuña may now be considered as almost extinct within the limits of this republic, whilst through the valley-forests roam vast herds of peccaries, and no more savage nor courageous brute exists in its wild state, particularly when found in numbers. In the year 1877 three young men started hence for a ride into the dense woods, when suddenly they heard from their recesses a continued rustling and evidently approaching noise, which they at once recognized to proceed from the advance of a drove of peccaries (*Dicotyles tajaçu*); so two of them instantly set off homewards to procure guns and ammunition in order to shoot some, leaving their companion to watch the formidable *Tajaçu*. Aware of their ferocity, he lost no time in vaulting from the saddle and tying his horse at the foot of a good-sized tree, up which he climbed so as to be out of reach of their lancet-like tusks. His two comrades promised to return in half an hour, but were delayed

by having to cast bullets, and on hastening as soon as possible to the spot where they had left their friend, were horrified to discover, that not only had the fierce pachyderms devoured his living horse, but had uprooted the tree and made a meal of him too, as was testified by the recumbent trunk and the remains of his clothing.

CHAPTER XLVII.

1,200 MILES UNDER CANVAS.

CONTENTS:—En route for Jujuy—A gang of prisoners—Reckoning without our host—The golden fleece—An invitation from a clump of quebrachos—A shower of liquid resinous gum—Quebracho Colorado v. Cebil—A Lapacho in full bloom—A thought of Kew—A persistent enquiry persistently refused—A cheerless view of Jujuy—A gloomy old pile—Machinery for Bolivia—Mules faithful to the madrina—A matutinal tub in the public streets—Description of the city of Jujuy—Chronic revolution—Climate—Chicha—Sugar cultivation—Mataco Indians and their sweet tooth—Mineral wealth—Thermal and cold Baths—Analyses of waters—A Chinese painting—A dreary interview with the Governor.

Early on the morning of the 26th of October we again took to the road and bade adieu to the charming city of Salta, en route for Jujuy distant eighteen leagues, emerging by the northern side on to the grassy plateau, which bounds it in that direction, and whence a fine view of its buildings is obtained. The first object that met our eyes was a gang of prisoners road making, and guarded by gendarmes with loaded rifles; and on leaving a large ecclesiastical college on our right, the road winds alongside the telegraph posts, through the broad valley skirted on both sides by hills and mountains. We now descended to a lower level and lost sight altogether of the city in our rear; but not long before our arrival at Caldera, in the upper part of the Lerma valley, were compensated by many delightful prospects of forest and Alpine

scenery. Then plunging into the Rio Vaquero, a fine, clear, sparkling, rushing mountain stream, its further bank landed us in a rich agricultural district, that continued all the way to Caldera, which lies 5,000 feet above sea-level and four leagues from Salta, where, as we had companions thus far, and met with a tolerable *posada* (inn) amongst the few scattered dwellings forming the hamlet, we determined to put up for the night. Reckoning however without the host is a dangerous practice, and so we found it, for on calling for the bill on the following morning, our chagrin was extreme to discover that the precious swindler of a Bolivian landlord, who must have served an apprenticeship to some Boniface at an English or Scotch watering-place, had saddled us with liabilities amounting to £1 5s. each, including such items as 6s. each for dinner, 2s. 6d. per bottle for very inferior native wine, and 1s. 6d. for each mule's pasture; an imposition that galled me all the more as I occupied no room, but slung my hammock beneath the corridor.

After this the atmosphere of Caldera no longer agreed with me, and little time was lost in increasing the distance of our cavalcade from a caravansary, whose sign might with justice be styled the "Golden Fleece."

In our progress along the rapidly narrowing valley, we have at times to descend into the stony bed of the Vaquero, which here completely fills the basin, then again to ascend the low hills that hem its waters, to return once more to the river chan-

nel; thus with alternate rise and fall, over the thick green sward that covers the knolls, through the dense forests which ever and anon springing from the water's edge overflow the very hill tops, and down among the boulders which here and there reveal the presence of kaolin, our course is everywhere marked by picturesque scenery. Nestling in romantic sites against the hill sides lay several estancia houses, with herds of cattle and flocks of sheep or goats browsing on the rich pasture lands, and then arose to view a hamlet called Perico which detained us not, but towards midday however we did accept the invitation from a clump of magnificent *Quebracho colorado* trees to turn aside and halt for breakfast beneath its dense foliage. Here as we lazily reclined, the gentle breeze that every now and then disturbed the leafy canopy above, distilled upon us a shower of what we at first took to be dew, but on examination found to consist of liquid resinous gum which, exuding from every stoma, covered both twigs and leaves with viscous drops that glistened in the sun light: no wonder then that the timber of the *Quebracho colorado* is rendered so hard and dense, as its pores are saturated to repletion with gums and resins, or that its bark, stuffed as it is with tannin, should be so highly esteemed by the currier; yet although it is employed in the Upper Provinces in the preparation of leather, the priceless Cebil is the tree commonly preferred for that purpose.

Our route was soon resumed, but the character of the landscape underwent alteration; during the

afternoon journey the valley assumed a rocky and barren aspect, with here and there leafless trees, an entire arboreal change from the experience of the morning; the absence of foliage however was, in many instances, abundantly compensated, as in the case of the magnificent Lapacho (*Tecoma asper*) which, towering and spreading to the size of the finest oak, was covered so completely with clusters of amber bell-shaped flowers as to present one huge bouquet that concealed from view both trunk and branches, without doubt the most beauteous floral display I ever witnessed. The Ceibo too with its gaudy scarlet corolla in full bloom, the giant *Yuschan* ablaze with floriage, besides the Mato, Tipa and Cedar and many other forest magnates somewhat less pretentiously robed, crossed our path at intervals. We now turned out by the main valley and passing some low hills entered in succession two or three woods which, although not remarkable for size, were filled with noble stems, interspersed with an infinity of flowering shrubs that inspired me with a thought of Kew and a desire to transplant them thither; but as evening now drew on, our progress became exceedingly slow as the mules showed signs of great fatigue, a sure indication that the peons did not do their duty by them in Salta; although they were a week at pasture there, I found out afterwards that the pasture was worthless.

The sight of a few ranchos now cheered us, standing as sentinels at the outposts of civilization and approaching population, and after accomplishing another league and descending into a hollow

basin, we took a sharp turn to the left and arrived within sight of Jujuy in the distance, but as the sun had already set and twilight is but very brief in these latitudes, it commenced to grow dark almost immediately, a fact which added strength to our efforts; so pushing on, we soon entered a broad highway lined with cultivated fields, and here and there cabins, at every one of which, even to the very town itself, we persistently enquired for pasture only to be as persistently refused; the wretches had it all the while, but unanimously conspired against the traveller to declare, they did not know where there was any. At last, the mules and their riders, both thoroughly exhausted with want of food, the length of the stage and the continued shouting for pasture, entered the precincts of Jujuy amid complete darkness, when haply a peon, one of our arriero's numerous friends, unexpectedly accosted us and said that his master had an empty house and corral and no doubt would allow us to unload there and occupy the premises for the night. This gentleman, who had himself arrived from Salta the same day, willingly acceded, and so under the guidance of the Samaritan we wended our way down only one street and were quickly quartered in an old dilapidated building in utter ruin, whose gloomy portals inspired us with no very cheerful ideas of this northern borough; indeed already had our spirits been sufficiently depressed as we passed through the lonely plaza and caught night glimpses of the deserted thoroughfares illumined every hundred yards or so by solitary tallow dips, whose lurid

snuffs guttering the foul grease into runlets served only to provoke darkness and render it more dismal, and this too in a neighbourhood where mineral oilsprings exist.

The streets were paved 'tis true, but would have been better left in their natural state, and as if for the special discomfiture of the unwary traveller, down the centre of each ran a dyke of water a foot in depth and breadth, with perpendicular sides threatening leg fracture to the mules, and capsize to their riders.

We found out that there was a sort of hotel in the place, but as it was termed the *Tambo* (Cowshed), the usual name for an hostelry in Jujuy, it was deemed prudent to remain satisfied for that night at any rate with our present quarters, although all within and without was as gloomy as death.

The extensive old pile consisted of many large rooms but all on the ground floor, roofed with ancient tiles and laid with brick, but the principal one had its flooring completely uprooted by an army of rats, the brown Norway rat (*Mus decumanus*) which in South America, as in Europe, has altogether superseded the less enterprising *Mus rattus*; these resolute engineers had pounded together earth and dirty maize to form mounds and depressions, by which means walking therein, especially in the dark, was rendered very lively; whilst two others were almost blocked by heavy machinery on its way to the mines of Huanchaco in Bolivia. Of the two patios, the outer contained only a couple of defunct orange trees which, sympathising with the general

decay around, chose to die too; the inner however was nearly filled with a further supply of the machinery; but a small garden at the back of the premises it was that yielded the only evidence of vitality in the neighbourhood, and this was literally choked with flourishing orange trees, amongst which I fortunately spied a *citrus limonum* loaded with fine fruit, that was forthwith embargoed to contribute its share to our scanty larder.

We set to work without delay to scrape and clear one of the rooms and dragging forward some heavy pieces of machinery managed to sling our hammocks to them. The mules were turned into the patio supperless as ourselves, the remnants of the maize flooring serving to amuse them till morning, when they had a treat of fresh-mown grass, which is brought into the town daily on horseback and retailed at about 2*d.* a bundle. The outer gate was left open, so that the animals could visit the *acequia* for water when they pleased, after which they invariably returned, as we took the precaution to keep the *madrina* under lock and key.

When I rose in the early morning and looked out into the main street, there sure enough was a portion of the population busy washing themselves publicly in the canal that traverses the centre of each thoroughfare, and however satisfactory the disclosure that the inhabitants were inclined to cleanliness, it was by no means so gratifying to think that their matutinal ablutions were performed in the only streams available for drinking purposes.

The town of Jujuy appears to contain a laborious population of about 4,000 inhabitants in whom marked traces of Quichua extraction are very observable. Placed at an altitude of 4,500 feet above sea-level by my aneroid, in Lat. $24^{\circ} 11'$ N. and Long. $65^{\circ} 21'$ W., in a fertile and picturesque valley running due east and west, and through which the San Francisco winds, this distant scion of the republic nestles amid ranges of mountains which intersect in every direction, from whose interesting network however the eye is soon withdrawn to rest upon two very lofty chains, one bearing westward and the other northward from its precincts. Notwithstanding the beauty of the site of Jujuy, as a town it is by no means so flourishing as Salta, nor can any comparison be instituted between their public buildings; a market, two or three wretched-looking churches and convents, a Plaza devoid even of the customary central obelisk, and a few tolerable stores, are all that here partake of a more or less public character; and further it would seem as if the city, although founded in 1592, had no history, either national or civic, from the absence of any monumental record of past events: and yet the means of living are abundant and the people give evidence of being happy and contented at least with their physical but somewhat impecunious lot; as regards politics however, which are at once to them a passion and a pastime, so universally do crooked counsels prevail, that a chronic kind of revolution reigns in Jujuy, but fortunately of a supremely harmless type. Of

the climate it is impossible to speak very favourably, inasmuch as overpowering heat and icy winds from the neighbouring snow-clad summits alternate, meteorologic conditions not only unfavourable to human development, but very deleterious to high class cultivation, and moreover chuchu is not unknown in the autumn.

The outskirts of the town strike the eye very agreeably, from the picturesque grouping of mountain and dell, both of which are clothed with a luxuriant natural vegetation, whilst every available spot in the valley is sown with the vivid green of *alfalfa* or maize, from which latter *Chicha* is manufactured, a drink that stands in much the same relation to the Jujueño as beer to an Englishman.

Although in the province generally sugar cultivation succeeds well on the banks of the numerous rivers, only about a thousand acres are as yet under it, owing to the want of capital. On the present plantations which, curious to relate, are all owned by Salteños, about 2,000 Mataco Indians are employed, and a yield secured of about a million pounds, besides molasses and spirits of wine, but here as in Salta, the loss sustained from aboriginal consumption amounts to more than one-eighth of the output.

To speak of the mineral wealth of Jujuy, would be enumerate all the chief metals, especially gold, whose dust is brought down by almost every stream which issues from those grand masses that, leaving their volcanic home amid precipices, ravines and profound abysses, raise their giant heads far

above the clouds; besides rock-salt which is brought from the Puna in blocks, and petroleum that only awaits a golden wand to pour its unctuous offering into the lap of man: the fact is, the extraordinary mineral resources of the region are as yet almost untouched, save in a very few spots and then only by the most primitive methods employed by the Indians.

Three leagues from the capital occur those silico-sulphuretted baths, both thermal and cold, called *Los Reyes*, the latter of which hold in solution the extraordinary amount of at least twelve per cent. of silicic acid, and whilst the Thermal contain mineral ingredients to excess, the Cold hold them in small proportion; so that, as their constitution is unlike what is found in Europe, analyses are appended of these waters which enjoy such high repute in this country especially for the cure of all classes of skin disease.

Analyses of 100 cubic inches of each of the Thermal and Cold waters at Los Reyes, the former of which have a constant temperature of 65.7° Fahr.

THERMAL.		COLD.	
	Grains Troy.		Grains Troy.
Bicarbonate of Soda	3.057	Bicarbonate of Soda .....	.106
Bicarbonate of Iron .....	.157	Bicarbonate of Iron .....	.114
Bicarbonate of Magnesia	1.123	Bicarbonate of Magnesia .....	.396
Sulphate of Lime	4.881	Bicarbonate of Lime .....	.488
Sulphate of Potash	1.552	Sulphate of potash .....	.594
Sulphate of Soda	7.193	Silicate of Soda .....	.162
Argillaceous earth .....	.010	Argillaceous Earth .....	.012
Silicic acid .....	.889	Sulphate of Lime .....	.211
Chloride of Sodium	1.499	Sillicate of Lime .....	.465
Organic substances	1.702	Chloride of Sodium .....	.239
		Organic substances .....	.063
	<hr/>		<hr/>
	22.063		2.850
	<hr/>		<hr/>
Free carbonic acid .....	.864	Free carbonic acid .....	.261

As I bore a letter for the Governor Sr. Bustamante, and could only afford one day in Jujuy to rest and provender the mules after their yesterday's journey of fourteen leagues over very rough ground, I hastened to the Plaza to deliver it, as the Cabildo is the spot where are usually focussed all the judicial and administrative powers, the Government, Legislature, Federal courts, Police &c.; but to my astonishment I found the Supreme Executive located three squares away in another part of the town, occupying an azotea building of no pretensions, and only distinguished from a private residence by the Provincial arms over the doorway and beneath them the title "Government House," inscribed in white letters on a blue oval-shaped ground. Here a short passage or *Sajuan* led into a patio adorned with a small garden, on entering which my attention was at once arrested by a most unartistic painting on the wall of the corridor, representing some mythical fluvial or lacustrine scene, backed up by mountains. Now although Argentine soil is not as yet favourable for the cultivation of the fine arts, a native artist would scarcely have violated the rules of perspective so grossly as to render, irrespective of distance, boats, figures and mountains, all of the same size; so that I came to the conclusion that the daub must be the work of some Chinese genius in favour in Jujuy, where albeit art does not flourish as it should, some excellent paintings, from the brush of Indian neophytes, are to be seen in its churches. When my amusement abated I bethought me of my errand and clapping my

hands advanced towards an open door, through which emerged an old gentleman, who enquired my business. I said I had a letter for the governor, which he took and beckoned to a seat, whereupon I was quite taken aback to find so great a man acting as his own porter and orderly. After a time he laid down the missive and quietly rolling a cigarette remarked that the recommendation was dated far back, in which I acquiesced, as I had not had an opportunity of delivering it before, and Jujuy was a considerable distance from Buenos Aires, an original observation considered highly satisfactory by both parties. I remained about half an hour, during which period only one somnolent clerk brought in a document for investigation, and then becoming sleepy asked for letters of introduction to the authorities in different parts of the province, having obtained which I left the drowsy precincts where His Excellency of Jujuy holds his dreary court.

CHAPTER XLVIII.

1,200 MILES UNDER CANVAS.

CONTENTS:—Departure for Oran—Different methods of estimating distances—An interminable forest—Forest born cattle in the jungle—The croaking of frogs indicates human habitations—A mule goad—Palos blancos a sugar district—Noisy troperos—Lazy service—The difficulties and secrets of travel—Fantastic nests of the Icteridæ—Crossing the Rio Grande—San Pedro and its sugar—Overpowering heat—Foliation differentiæ—A violent whirlwind—Night and day mosquitos—Resurgam—A deluge—Locomotive Cicadæ—Arrival at Ledesma and description of it—Feudal system still extant—Account of a sugar factory—Tucuman tariff—Indian labour and pay—Marsupial squaws—Travelling pedlars—A troublous night under an open corridor—Universal passion for alcohol—Insect plagues—A brace of inebriates.

Early on the morning of October the 29th, we made preparations for our last stage to the extreme north of the republic, and sallied forth en route for Oran in an easterly direction passing a chain of hills and some few ranchos for a league or two until debouching into the open, we found it covered with prickly shrubs overshadowed here and there by the lofty Algarroba and magnificent Cacti in full bloom, which greatly adorned the landscape with their orange-coloured, gaudy, waxen flowers. A dense forest lay just in front and as we entered it, a lovely deer sprang across our path, almost the only example

of inferior life we observed in this dark retreat, and on arriving at a hamlet called Pongos, we enquired the distance to Palos blancos where it was our intention to pass the night and were delighted to find it only three leagues, as then we should reach it before sunset, but after traversing some miles further, a similar enquiry of two men tending some cattle was met by the rejoinder that fully five leagues still intervened; and this discrepancy in estimating distances, more or less universal throughout the Plate, is accentuated in Jujuy as the roads remain unmeasured. Finding ourselves thus in need of greater exertion we pushed on at the utmost speed, but another very dense forest of mato, tipa, arco, ceibo, &c., of somewhat low growth, although fortunately not yet in full leaf, soon opposed our progress, offering but a very narrow tortuous bridle path, through an intricate avenue where the trees met overhead, and in which at intervals stood the imposing Palo borracho with its swollen trunk. Every moment, the wish giving birth to the thought, we expected to discover an opening in this interminable maze, and as now the sun had set and a Cimmerian darkness was fast settling, our anxiety rose to intensity, not so much on our own account as that of the quadrupeds, which were now thoroughly exhausted and had no prospect of either food or water at the end of their daily journey. To our surprise, the forms of forest-born cattle were distinguished here and there struggling to pierce the dense jungle to graze upon the undergrowth, but how their owners could ever hereafter hit upon their trail and gather

these loose elements into one synthetic herd again, will ever remain a mystery to me. And now as in complete darkness we mechanically traversed a forest thread, less distinct than Ariadne's, a strong inclination was manifest to call a halt for food and rest, especially as we felt convinced that a wrong turning had been taken some leagues back, but the absence of water rendered such a step inadmissible; our patience was at length rewarded by discovering a broad cart track deviating from our bridle path, and this inspired fresh hope, as the road if not the right one evidently led somewhere. To renew exertion in the mules was however a work of great difficulty, and not till I who was riding in advance suddenly caught the stridulous croaking of frogs a long distance ahead, an invariable harbinger of human habitations which, in this country, are always built in the vicinity of water, succeeded by the barking of dogs, that sent a thrill of delight through our whole cavalcade including the beasts of burden, could we induce them to respond, but now with ears erect to hearken to the joy-inspiring sounds, away they trotted nimbly so as soon to reach an open spot where a light was visible; but a canine chorus in advance lured us hence to cross a stream of water alive with the noisy *Ranidæ*, when we were suddenly confronted by a great blaze in the middle of the road, revealing an encampment of a troop of carts. The men in charge, on being questioned, indicated a neighbouring house where pasture could be obtained, so as it was very late, and thunder and lightning threatened a heavy storm, our further

proceedings that night, unloading, erecting the tent, and dining, were hastened to the utmost.

This was Palos blancos, a small but rich sugar district, situated about twelve leagues northward from Jujuy, and producing annually perhaps 150,000 lbs. of sugar, 300 barrels of spirits of wine of the ordinary strength, 17,000 lbs. of molasses and 5,000 lbs. of foots, the latter of which is pressed and cut into small thick slabs, and universally eaten especially with cheese.

Rain fell as anticipated during the night, as however our tent was one of Edgington's waterproof, when once under it, we were supremely indifferent to that, but about 3 a.m. were awoke by a most unearthly din of shouting, jingling of bells, stamping of hoofs and champing of iron curbs, as the *troperos* were preparing for a start and driving their mules from the potrero, where they together with ours had been grazing during the night. Of course I jumped up immediately, lest they should take my animals with theirs and leave us literally without resource, and although the arriero was asleep outside, with all this bustle around his very ears, nay the mules almost kneading his recumbent form, for all that he lay perfectly unconcerned to everything, and as shouts failed to awaken him, my assistant's aid was enlisted to arouse the lazy fellow by sheer force and then on his leisurely return from the potrero he reported one of our troop missing. Thereupon the peons were summoned to saddle and seek the truant, but in the meantime taking a stroll by myself down the road, what should I see but the

mule quietly enjoying a solitary meal by the roadside, so having driven the beast into the potrero again I returned bursting with indignation to vent it upon my men.

This is a specimen of the service in these parts: my arriero had the best of characters, was a comparatively educated man and certainly well-allied; nevertheless with these and other advantages, if the owner does not personally inspect every arrangement, speak their language perfectly, and treat the men very sternly, with no approach to familiarity, travelling through these regions becomes well nigh an impossibility. Other difficulties there are, such as the large stretches of uninhabited country and consequent scarcity of food and fodder, which some of my readers may innocently imagine should be taken in greater quantities, but this would require a larger number of mules, to feed which would tax greater ingenuity than man possesses, to say nothing of the chance of their dying on the road. The only secrets which an explorer here, equally with a general, must keep in mind are to engage as few mouths as possible, and reach stations without unnecessary loss of time, otherwise of a lengthened tour in the Argentine republic, nothing would remain as a record but bones human and bestial.

As further sleep was out of the question by reason of the general disorganization reigning, we started from *Palos blancos* at sun rise and pressed on through dense woods of low prickly *Mimoseæ* and flowering shrubs, with here and there a noble Cedar, Lapacho (*Tecoma asper*) or Molle o'ertop—

ping the impenetrable mass beneath, and in which multitudes of the *Icteridæ* had built their fantastic nests. The reader unaccustomed to such a singular spectacle would scarcely credit the effect of a natural aviary of hundreds of these bottle-shaped habitations, a yard long and a foot in diameter, hanging pendant from the extremities of low twigs which, bending well down with their weight, swayed backwards and forwards just above the reach of a horseman; here the hang-nest is driven to use twigs and grasses in the construction of his home, the entrance to which is near the bottom; I had not time to obtain a specimen of the bird, but saw the pretty little brown creature very busy.

In front of us now ran the Rio Grande de San Pedro, a river with a very broad and deep channel, whose bottom was paved with stones and boulders, and which in the rainy season becomes a mighty torrent completely impassable; we chose a spot of diminished breadth, but being deep and with such a slippery and treacherous bed, had much difficulty in crossing, but once on the farther bank and finding that the sun pointed to ten o'clock we forthwith encamped for breakfast beneath the shade of some splendid Tarcos. About 1 p.m. we arrived at the village of San Pedro, another small sugar district, producing 260,000 lbs. of sugar and 350 barrels of aguardiente, and what surprised me here was to find, the most modern European machinery at work and a great number of Mataco Indians employed, on the plantation and factory belonging to the Araoz family.

Although it wanted more than a month to the summer (winter in Europe) solstice, the heat now became insupportable, so letting the cargo mules travel forward under the care of the peons, we two threw ourselves down under the shelter of a tree to rest and drink some lemonade; and on resuming the march, the road presented nothing but sand lined by thickets of low and as yet almost leafless trees and thorny bushes, dotted now and again with a *Palo borracho* in magnificent foliage. The difference in the times of the somewhat adventitious foliation of the trees struck me forcibly: for on descending into a slight hollow where the moisture was never so feeble, there the branches were sure to be in full leaf, but ascend a gentle rise or traverse a plain, above all a sandy one, and there they scarcely gave any evidence even of budding.

Once again we had to dismount overburdened with the heat, and this time unsaddled the suffering mules and stretched ourselves at full length under the scanty shade of a young *Palo borracho*; my assistant went to sleep at once, but as I was perspiring inordinately and a breeze blowing, the prospect of a severe cold induced me to abstain from following his example; nor would the attempt have been of much service, for in a few minutes up sprang a violent whirlwind as if by magic, which swept round and round the tree, lopped off its branches like splints, hurried them yet creaking, groaning, splitting and spinning, mingled with dust and leaves, fully a hundred feet into the air, and it was only by holding on as by a death grip and standing very

firm that our bodies escaped a similar fate, whilst our nervous systems experienced all the horrors of the continuous and rapidly ascending spiral. Nor was this the least source of danger, as when the gyratory blast rage was expended, down came the heavy debris with thundering rush, and many have been the victims of this the afterbirth of these dynamic revolving columns, which are excessively common in this district and withal very violent.

As the sun was now on the wane, away we started afresh to overtake our caravan and reach the trysting place for the night, Rio Negro, nine leagues from *Palos blancos*, but still in the sugar district, and before arriving at the village, a river of the same name had to be crossed. Here we luckily had no difficulty in meeting with pasture and so proceeded at once to camp out beneath the shelter of some fine trees by the road side, to whose branches our hammocks were slung; but as for sleep, the mosquitos effectually banished that, and to baulk our tormentors somewhat, we rose before daybreak and recommencing our journey 'ere the sun put in an appearance thought to give them the slip, but the first streak of dawn brought hosts of their brethren the day-mosquitos who, with the winged ants, had only lain in wait for the summons to enter into an unholy alliance against our peace, productive of a persecution still more cruel, so much so indeed that we began to think we had better have taken the advice of the Etonian wag who, on seeing *Resurgam* on the tombstone of his former severe master, wrote underneath "Lie still if you 're wise!"

The route from Rio Negro presented much the same physical features as before; of animal life but little was visible, comprehending only a few pigeons, a *carancho* or two, and perhaps a dozen smaller birds of the families *Fringillidæ* and *Tyrannidæ*; butterflies were even scarcer, as no more than two or three species of *Heliconius* and *Euryades* showed themselves; so that my disappointment was great at this apparent dearth of the fauna in a region so tropical. About noon we arrived at another village called *Reduccion*, where the inhabitants are all engaged in the cultivation and manufacture of sugar, and here we halted for breakfast and the midday *siesta*, an institution I now determined henceforth to adopt, especially after the experience of the intense heat of yesterday.

Orange and palm groves combine with the sugar fields to render this neighbourhood delightful and its beauties sufficed to detain us a couple of hours, after which we again took to the road in order to finish the day's journey at Ledesma, one of the most populous town of the province of Jujuy and nine leagues from Rio Negro. But as we started, banks of ugly looking clouds discharging lightning were rapidly coming up, and soon distilling rain in large drops, drove us hurriedly beneath some trees for shelter, which when wet offer a secure retreat enough in thunderstorms; whilst the peons disdaining cover pressed on with the cargo mules. My assistant chose one trunk, and I another, and scarce was sufficient grace allowed to jump into a bed of prickly *Chaguar*, to rig a rug on the lower

branches and don the *poncho*, when down came the deluge, a tropical one, lasting however only twenty minutes, during which time, standing in a very cramped position with body bent forward, I dared not stir an inch or otherwise I should have been soaked through and through from above, or lacerated from beneath by the terrible thorns; as it was, the rug was, reduced to a pulp, but no other damage done.

In these woods it was that my companion was deceived into the belief that a railway was close at hand, by the shrill voice of the locomotive Cicada, without doubt the loudest voiced animal, for its size, on the face of the globe.

To catch up the peons was now our object, but the roads were so heavy and slippery as to diminish our pace, until we came to a tributary of the San Francisco which, falling straight from the Calilegua mountains, has four different channels, excavated in as many years; for it is the custom of these torrents to chisel out for themselves a fresh course every season; these we hastily crossed before the rains had time to flood them, as in a few hours they would become altogether impassable.

On the other side the character of the country changed from a sandy soil to a loamy, richly clothed with fine arboreal, jungle and grassy, growth, but the low lands we had to cross were already inundated, and a perilous, hot, damp vapour hung over them, more than suggestive of Chuchu, of which I have a lively horror; so that we needed no other incentive to leave so dangerous a spot, and soon after ar-

rived at the outskirts of Ledesma, where our drenched followers were discovered already unloaded and comfortably established at a house that provided them with pasture.

The town of Ledesma, much inferior in size to that of Jujuy, possesses a permanent population, scarcely if at all exceeding 500, yet during the residence of the migratory Indians, its census is swelled to upwards of 3,000. It consists of a long broad street with a deep mountain stream rushing down its centre, and a few bridges to allow communication from one side to the other. The houses are all of adobe with thatched roofs, having doors but no windows, the whole as lightly constructed as possible, with corridors facing the street. The entire town is well wooded, each house being provided with an orchard at the rear and another at the sides, mostly filled with orange groves and banana trees, whilst the background at a little distance is made up of moderately elevated hills, but beautifully timbered to their summits. All the dwellings in, as well as the site of, the town belong to the lords of the manor, Messrs. Ovejero Brothers, whose property extends some square leagues; moreover, the whole population is so to speak employed on the estate, as they have to work when called upon, in the busy season at any rate, a state of society recalling the condition of Feudal Europe in the twelfth century. All the tenants are allowed a small plot of land whereon to build, with a garden, but when they leave, all erections and other results of their labour revert to the estate owners, without

compensation for improvements; they pay no rent for the land but if they require additional ground for rice, coffee or sugar cultivation, then an annual payment is exacted. Now on the sugar plantation of the Araoz family at San Pedro, through which we passed, a more equitable system prevails; there a yearly ground rent of 10s. a plot is charged and the tenant is allowed to build according to his inclination, and on quitting to sell the premises subject to the sole condition that the ground rent be paid by his successor; the result is that in San Pedro, the houses are more substantially constructed than in Ledesma; in fact, in the latter place there are no more than one or two tolerable dwellings, and these were erected by the estate. On strolling up what would undoubtedly be called the "High Street" in England, a very extensive, dirty-looking, transverse range of dilapidated old buildings almost bars further progress, and herein may be noticed a chapel with a couple of bells, where service is performed but only a few times in the year, as the clergyman has a very wide district to administer. This antique pile is the sugar factory of the estate belonging to Messrs. Ovejero Brothers, and looking at it from the front, one is scarcely prepared for the vastness and completeness which an internal inspection reveals, and still less so to learn that this establishment was the first to employ proper English machinery, whose original cost was almost doubled by the expenses of transport, and thus set an example to the mill owners of Tucuman, which they have not been slow to copy. Vacuum pans

and centrifugal action are set in motion by three large boilers, whose furnaces for the first month of the harvest, which commences on the 1st of June and terminates on the last day of October, are fed by wood cut in the neighbourhood by a gang of fifty Indians employing a like number of carts, yet notwithstanding this great consumption, there is no fear of the supply running short, as not only is the country magnificently wooded even to the mountain summits, but the young growth is renewed so quickly. After the first month however, the refuse cane, which is laid out to dry in an open court-yard at least four acres in extent, serves well for fuel, as it is a great heat producer. In this as in most other factories I have visited, the machinery is in advance of the raw material, a sufficient stock of which cannot be obtained, although increased planting takes place annually, and it is now becoming the custom for factors not to cultivate but purchase of small growers, a practice likewise universal with the grape in the wine districts. Here I chanced upon a very intelligent Englishman, Mr. R. C. Leach, who as chief engineer kindly acted as my *cicerone*; this gentleman spends much of his time in mechanical investigations and has already invented, among other things, a very simple and economical machine for shelling rice which, worked by a single mule, delivers 50,000 lbs. in a season. Last year from 540 acres planted on this estate with cane, the yield was 875,000 lbs. of sugar, which could easily be increased to a million under present arrangements, 80 cwt. of cane producing about 3 cwt.

of sugar; and 1,000 barrels of caña, the result of the plodding action of three old-fashioned stills; whilst in addition the property was credited with 62,5000 lbs. of excellent rice, which met with a ready sale in Salta at about $5\frac{1}{2}d.$ per lb. The produce is taken in carts to Salta where the Messrs. Ovejero have established a store to retail it, but prices have to be arranged according to the Tucuman tariff which rules the roast, as whenever an opportunity offers a slight margin of profit, the market is flooded from Tucuman, and for this reason the Ledesma factors view the new railway in progress with no favourable eye, because although their cane is superior to and its yield greater than that of Tucuman, labour is much dearer and the present difficulty of competing in price with their southern neighbour would be augmented by increased facility of transport. In the year 1876 machinery worth £10,000 was imported from the firm of Fawcett, Preston & Co. of Liverpool which, together with the extent of the plantation, renders this establishment third or fourth in importance in the republic. The labour at the works is performed by about 400 Matacos, a race of filthy Indians from the Chaco, 100 Chiriguano, a tolerably well clothed set of sables from Bolivia, supplemented by about 100 Christians. Each Indian receives 25s. a month besides food, and the consumption of cane by themselves and families is simply enormous, fully from one-eighth to one-quarter of the total produce. These children of the desert, who by the bye are great thieves and drunkards, will not be tempted to settle

by any the most advantageous offers, but arrive at the commencement of harvest mostly in gangs with a chief or *cacique* at the head of each, who although he does no work receives wages like the rest and acts as overseer; the actual money however received by these half-domesticated savages at the end of their engagement is insignificant, as they are paid chiefly in clothes and other necessities which must be purchased at the store belonging to the owners of the estate. I saw a corps of twelve Chiriguanos marching in to Ledesma from their distant home, in Indian file, at a quick step, headed by their *cacique* in a threadbare military uniform; they all carried either lances or bows and arrows, with the exception of one who proudly flourished a rusty sword; of dark copper-coloured complexions and broad features, all of them without exception were adorned with the blue clay button inserted in the under lip, a custom which is common to the Esquimaux, many of the North American Indians, the Boto-cudos of Brazil, as well as the Guaranis. The squaws too were numerous and characterized, especially the Matacos, by a most peculiar tottering gait as they wobbled along like marsupials with their infants suspended in a pouch on the left side; moreover one habit of the Matacos deserves notice, whilst many others merit strong reprobation; they build little reed huts to live in which, on the termination of the harvest and the eve of their departure homewards, they always burn to ashes.

A bonus of £1 is paid for every Indian brought in, a fact that indicates pretty clearly the scarcity

of labour. A proper English company, with sufficient capital and modern machinery and importing Coolie labour, would find in Jujuy a very wide and profitable theatre for operations, not alone in sugar and rice, but coffee, tobacco, cotton, coca, yerbamate, minerals and petroleum; whilst all the tropical fruits grow there in perfection, as the frosts, so injurious in Salta, are completely unknown in this more northerly province.

On our arrival, we put up under the corridor of the house where the peons had already secured pasture for the mules, but as this was open at both ends and only about ten yards long, with very stormy weather threatening, the protection it afforded was but slight. We had just finished dinner and prepared our beds inside a hollow square formed by our boxes, when a boy presented himself and wanted to buy a pair of our best boots, size immaterial: the inhabitants took us for travelling pedlars, an idea perfectly justifiable from the extent of our luggage and of which we could scarcely disabuse their minds. We now turned in and the weather amply verified our expectation; down came the rain in torrents and continued all night, the spray from which invaded our fortress and blew in our faces, but that was a slight trouble in comparison with the other causes that entirely banished sleep. A short distance down the other side of the street, a big drum, clarionette and fiddle were banging, blating and scraping incessantly the livelong night, a practice of which I had a lively remembrance at Andalgala, and which here as there com-

mences every Saturday at 6 p.m. and continues till Monday morning almost without intermission, the people in the meanwhile dancing and drinking raw spirits to universal intoxication. The authorities of Ledesma however have made a sensible regulation by which no spirituous liquor is allowed to be sold in any shop after midday on Sunday, as otherwise these alcoholic symposiasts never attend to their work on Monday. In illustration of this universal passion for drink, a man presented himself before us on the Sunday morning and wanted to sell his old *poncho*, pretty well his only protection, for a real or two (about 6*d.*), in order to go over the way and sot; we remarked to him that his garment was by no means new, "true," said he, "but it will do for a saddlecloth," however we failed to bite, and he had to try elsewhere for a baubee. But to return to the anthypnotics: the pelting down-pour, the discordant music, and the shouts of the bacchannals as they wended their tipsy way homewards, sank into utter insignificance by the side of the vigorous and persistent onslaught of vermin. To the English housewife a solitary flea is a matter of concern, a Lord—something heinous, but here armies of fleas, battalions of *binchucas* and brigades of spiders, besides troops of skirmishers of various nationalities made us their common prey; but however repugnant in appearance, all these act a comparatively unmalicious part, simply as leeches, and probably thus maintain their victims in health; but far otherwise is it in the extreme north of the republic, where vicious ants winged and unwinged,

scorpions, *garapatas*, chigoes, vampires &c., exhibit their fiendish malevolence.

As the following day was Sunday, we remained at Ledesma to allow the mules time for rest and food; and when it ceased raining, about ten o'clock, the first spectacle presented to our view was a pair of natives, as they rolled by arm in arm in a fearfully inebriated state; one was a fine tall man dressed in a white linen suit and riding boots, who ever and anon brandished a huge *facon* (knife) in a very threatening manner, meanwhile uttering terrible denunciations upon the head of some one who had offended him; the other, a much smaller man, who carried a spirit bottle to which both from time to time applied their unsteady lips, wore clothes bespattered with mud, and seemed to have passed the night in some neighbouring ditch.

What a field these upper provinces would afford for some god-like Father Matthew, or more modern salvation army, to engage in a crusade against the demon of drink! already in the metropolis, the desecration of Sunday by trading has been the subject of a prohibitory edict; a Humane Society for the protection of animals has likewise been instituted; and education is making rapid strides; all to the manifest advantage of public morals; let us hope then that ere long, paternal government backed by public opinion will take into consideration measures to save from utter ruin a whole population at present devoted to alcoholic drenching.

CHAPTER XLIX.

1,200 MILES UNDER CANVAS.

CONTENTS:—Rich coffee plantation—Yungas coffee—Description of a dense tropical forest—Fauna and Flora—We molest the harmony of the scene—Ulysses deprived of Penelope—Campo Colorado and nocturnal insect resentment—Flashing meteors—Maddened aerial locomotives—Moonlight and balmly essence—An arduous if not perilous chase—Driven from the forest—Entrance into the territory of Oran—Invisible tree stems—The jaguar at home but not disposed to entertain—A river of shifting quicksands—A tin trunk knocked into a cocked hat—An impenetrable forest—Drummer woodpeckers—Arrival at Oran.

On the Monday morning, rather loath to quit a district so rich, not alone in tropical harvests, but in cattle rearing, minerals and petroleum, we set forth from Ledesma passing through fine woods, in which Peruvian balsam, dragon-wood &c, abound, and after a league or so reached the deep-banked, boulder-bedded River San Lorenzo, whose channels, though numerous, held at present but little water; after crossing which we entered the town of the same name, situated in the midst of another sugar growing region, with a large factory worked entirely by Indian labour, and in the immediate neighbourhood a coffee plantation which, due to immunity from frost and a peculiarly suitable soil, produces a berry almost equal to that of Yungas in

Bolivia. Now for the information of Europeans it must be observed that this Yungas coffee possesses the strongest flavour of any on earth, not excepting Mocha; indeed the most fragrant beverage of this class I ever tasted was composed of a mixture of Brazilian, Yungas and Mocha, in equal proportions; and this is the usual post-prandial cup in vogue amongst the best families in Buenos Aires, who are somewhat of connoisseurs in the article. Owing to dampness of soil, the woods which we now traversed, on leaving San Lorenzo, were more luxuriant especially in undergrowth and ferns, wherever a shady nook favoured them. A few leagues more and we crossed the Sora, one of the eighteen affluents of the Rio Francisco, which itself, after shedding its precious treasures for four hundred miles through the province of Jujuy, falls into the Rio Vermejo; and then a dense tropical forest lay in front, into which we plunged, not without a feeling of awe, from the deep silence and sublime grandeur pervading its vast aisles, to find ourselves surrounded by gigantic trunks of quebracho, algarrobo, lapacho, urunday, timbo, guayac, tarco, molle, ceibo, cedar, &c., many of whose straight, columnar, smooth stems raised their towering heads two hundred feet, branching only at a giddy height; whilst others stood like Tuscan pillars to support the mazy mass above, being closely embraced from the very ground to the topmost point with lianas of diameter much exceeding their own, and which wound round their supports in corkscrew fashion by quick turns; indeed at one point of the forest, including many

acres, these Tuscan quite banished the columnar pillars. But 'ere long as we continued to invade the recesses of this lofty temple, made without hands, it became alive with worshippers, with the hum of immense multitudes of choral insects, especially wasps and bees, the screech of parrots (*Conurus vittatus*) whose flight in flocks of about twenty was limited to the clear aisles below the branches, the metallic and deceptive note of Jays (*Synocorax pileatus*) a bird equally inquisitive with its European relation, the mournful and misleading tones of the *Trogon variegatus* the forest ventriloquist, the confused but melodious strains of myriads of lesser songsters, and with the painfully stridulous minor-third of the red-crested Guan (*Penelope pileata*) which like an ungreased double-handed saw grating its way through unseasoned wood made the forest ring with its harsh cry; the gaudy Toucan also (*Rhamphastos toco*), the *Dendrocolaptes major* remarkable for its funny habit of scampering up the stems in succession but only as far as the branches, the rare but melancholy Hawk (*Geranospiza cerulescens*), several species of Synallaxis, sundry Woodpeckers, and one solitary Duck (*Cairina moschata*) which the natives call Royal, besides clouds of tropical Lepidoptera, the Papilio, Euryades, Euterpe, Callydrias, Danaus, Heliconia, Eresia and others, sought the shelter of this leafy pavilion, therein to disport. The insect and ornithic world were on the wing indeed, testifying delight in existence by rendering homage to their Creator, some with song and others with the mute adoration of beauty: no longer could

I complain of that absence of inferior life, which had hitherto greatly disappointed and somewhat depressed my spirit; nor, although the central and southern regions of the republic be robbed of arboreal magnificence, contemplate without amazement the mighty throng of mast-like stems, which clothe these hyperboreal districts in such rich profusion.

The pressure of hunger however soon compelled us to molest the surrounding harmony, and I now dismounted to get a shot at the Guans which, perched on the topmost branches, appeared small as pigeons, and though at a very long range for a fowling-piece, and difficult to mark through the tangled mass of branches and foilage, managed, with the right and left barrels, to bring down a brace of the magnificent, classic birds, and thus deprive two woodland Ulysses of their industrious spouses. Whilst I was thus providing flesh for the household, my assistant and a peon were climbing the trees and robbing the assiduous wild bees of their stores of honey, the sweetest I ever tasted.

So delighted was I with this beautiful forest that, on arrival at a place called "Campo colorado," consisting of but a few hardy foresters' ranchos buried in its depths, I determined to remain a day or two in its vicinity, although the delay was exceedingly hazardous for our return; so turning down a track that led to the river close by, we looked out for a suitable spot whereon to encamp, which at last presented itself within a hundred yards of the stream, but curtained in eternal gloom. Here

stood three enormous columnar trunks just at suitable distances apart to enable us to sling our hammocks, and alongside was a small open space barely sufficient to erect the tent: the ground was cleared, the canvas pitched, the boxes ranged round the entrance, and the hammocks slung in an instant, when having despatched the mules to the river bank where there was excellent grass, a fire soon shot its lambent flames on high, and in the pot were the two guans, birds which taken fat and young are very good eating, and at all times make a deliciously delicate broth, a compliment it becomes us all the more to pay, as henceforth we were much indebted to them for subsistence. But all these arrangements were not made in peace: for, on beginning to clear the ground we noticed the immense number of garapatas crawling about, of seven or eight different species, some almost microscopic, and they pretty soon made us feel their power. It was perfectly impossible to remain still a minute under the attacks of these ferocious bloodsuckers, and certainly every quarter of an hour a general overhaul of our persons became absolutely necessary, when at least twenty garapatas, besides other vermin, would be found exceeding their duty as parasites. In our progress hither we had frequently brushed these plagues off from the bushes on to our persons and suffered much from the assaults of single scouts, but here attacking in masses they drove us at last to the tops of the boxes, without however diminishing one iota of the vigour of their onslaught: and thus passed the first half day in bitter torment.

Of the Garapata (*Ixodes ricinus*), that nasty woodtick, which carries off the palm as a human and even bestial torturer, it is impossible to speak without extreme disgust, and if Dante had been acquainted with it, doubtless it would have figured in his list of infernal torments. It infests the grass, bushes, air, floor and walls, so that within a dwelling or without, it is impossible for man or animal to escape its attacks; nay, so insidious are the approaches of this cunning "*tick douloureux*," that it alights and crawls unnoticed to parts where the skin is thinnest, until suddenly burying its head right into the flesh, the vicious thing not only sucks blood voraciously on its own account, but if left alone for a time makes use of the opportunity to vomit forth into the cavity, from its mouth, an infinity of minute eggs fraught with a progeny equally foul with itself. The only method of relief is at once to extract bodily by means of forceps this ammonia-proof Ixode, an act accompanied by intolerable pain and sanguineous discharge, and which requires considerable force and dexterity to accomplish: sometimes however if too great violence is used, the head is left in, and then a severe wound is the result. Although it was not yet summer, when their blood-thirstiness is supposed to reach its maximum, nevertheless our existence, in the upper part of Salta, Jujuy and Oran, was rendered well-nigh insufferable by the incessant and determined malignancy of these Acaridian pests whose memory will for ever be inscribed on my mind, as the scars of their excavations are on my body; indeed the last mentioned district is

a veritable insect hell, in which no amount of wealth would tempt me to reside.

On retiring for the night, a couple of ropes were stretched over my hammock with sticks to keep them separate, on which were laid a blanket and waterproof sheet to ward off the dew, the assistant occupied the other hammock, one of the peons slung his poncho in like manner on the third side of the triangle, and the other coiled himself up on the tops of the boxes, whilst ranged in the triangular space between the hammocks stood the park of artillery all ready loaded: and so we composed ourselves, vainly imagining that as the wicked *garapatas* (day plagues) had ceased from troubling for this day, the weary would be allowed to rest. But miseries were in store of which happily we were ignorant until the time arrived for the uprising of the nocturnal insect creation in all its forest might. At Ledesma we had been abundantly satisfied with the persistent nightly attentions of various kinds of vermin, but here different species of mosquitos, all of the thirstiest, aided by winged and unwinged ants, spiders, centipedes and blood-sucking bats, so swelled the number of uninvited guests, that the hours of darkness were spent in their company as in purgatory. To relieve the darkness and mitigate the ferocity of the scene, the moon struggled hard to lance her rays into our midst, but in vain, although here and there a stem would glisten for a moment in her beams; but of flashing meteors, there were more than enough; as sand upon the shore, or star dust in the nebula, so were the Fireflies in their mazy

dance; as the fiery locomotive on its maddening express career, so were the whirring Fire-beetles (*Pyrophorus noctilucus*), which with a pair of bulls'-eye lanterns, each the size of a pea, fixed on their prothorax, glanced hither and thither on aerial rails, and at times launching direct for the weary traveller, threatened all the horrors of a Whitehead torpedo, betokened all the weird-like thrill of Turner's picture, so that to hear the whistle in ascending gamut as a knell, and to be overtaken and slaughtered by the onrushing Juggernaut, was the awaited doom of at least one of the drowsy suspended trio. Yet all was not torment on that troublous night; as the moon endeavoured to spread gentleness upon the scene, so a soft zephyr wafted to our exhausted senses the balmy essence of a thousand unseen fragrant bouquets, which wasted their sweet-laden breath on the summits of the colossal trees around us: nevertheless innocent victims as we were of insect ire both by day and night, not all the beauties of the forest, and they were not few, could compensate for the intense suffering undergone at the hands or rather the mouths of our tiny antagonists.

Accompanied by a peon carrying arms and ammunition, I spent much of the whole day, as well as of the two half ones we remained at Campo Colorado, traversing the forest in every direction in pursuit especially of the avi-fauna, wending my way amongst straight columnar stems of the Tipa, Palo de San Antonio, Lapacho, Cascaron, Espinillo and others which, rising in close juxtaposition, and without undergrowth, entwined their arms in fan-

tastic inextricable network above; or, as dampness, then swampy soil occurred, and the trees became gnarled, and the underbush of such shrubs as the Tala, Garabato, &c., with saplings and creepers like the *Canavalia gladiata*, Bejuco, Enredaderas &c., and lianas, rendered further progress in that direction impossible, standing to gaze upon the enormous beds of Ferns, two species of which, the *Pteris deflexa* and the *Darallia inæqualis*, attaining immense development, accentuated the tropical character of the scene.

Nevertheless, very arduous, if not perilous, was the chase, as with eyes intently gazing upwards and strained to the utmost to meet the ever varying ranges, the roped lianas, the fibrous runners, and the prickly mimosæ below, caused many a stumble resented by the lurking serpent, or by the myriads of fiery warrior-ants, into whose high conical formicaries the foot unwarily trespassed; however the larder was kept well supplied with feathered game at any rate, especially the heavy-bodied Penelope, whilst my museum at home had the prospect of many rare ornithological forms; but at last, the least conspicuous but most numerous and formidable of all the sub-foresters, so fiercely requited our intrusion into their domain, that we were fairly driven from it, rejoiced once more to mount on muleback and escape torments which, even otherwise boundless charms could not render endurable.

About noon of the third day therefore, we bade good-bye to Campo Colorado, and plodding on continuously till evening, arrived at the banks of the

Rio de las Piedras, a considerable affluent of the San Francisco, which forms the northern limit of the province of Jujuy and at the time of our crossing it, was broad but shallow. On reaching the opposite bank, we entered at once the territory of Oran, subject to Salta, and a village bearing the same name as the river just passed, in which was observed another sugar establishment surrounded by twenty or more dwellings, the property as usual of a Salteño. Here we remained for the night, which looked so very threatening that the owner of one of the houses offered us the shelter of his open corridor, which is always preferable to the close confinement of a tent, and the rain not belying appearances, came down in torrents during the hours of darkness.

Early next morning the journey was resumed, our path still lying through dense forests, whose stems were frequently rendered completely invisible by reason of the close clasp of the thick and tangled masses of creepers which, in full flower not alone from summit to base, but roofing the lofty vault with superb campanulate rounded heaps of blue, white, violet and rose, emitted overpowering but delicious perfumes. A few deer here trotted by although out of range; but what I most desired, expected and was prepared to meet, the jaguar, was neither seen nor heard; they roam these forests indeed in abundance, but are never observed by day, as they then lie close and require dogs to put them up, and we had not even "mal genio" with us now.

Throughout the earlier part of this stage, the River San Francisco kept us company eastward, displaying a fine broad sandy bed, but towards evening, we made the Rio Colorado, one of the most dangerous streams we had as yet traversed, as its bed is strewn with shifting quicksands which, especially when the river is swollen, make the attempt to cross, perilous in the extreme: indeed, several of the other rivers that barred our northward progress were likewise fraught with risk from the same cause, and many an anxious thought was directed to the return journey, when these now seemingly peaceful waters would be metamorphosed by the rains into horrid, foaming mountain torrents. After much laborious floundering we arrived safely on the opposite bank and immediately formed an encampment in the woods, turning the mules loose to graze by the river side, where herbage was fortunately abundant. Twelve leagues had been covered this day, but with considerable mischief to our baggage department, especially to a very solid London-made block-tin trunk which, from a close approximation to a cubic form, now bore the appearance of a cocked hat, gaping in every direction; in fact, it is a mistake in travelling in this country by mule carriage, to employ boxes of any kind, canvas or native hide petacas* are much more suitable, as the animals when tired, in their geometrical anxiety to find the shortest distance between two points, invariably dash the cargo against opposing trees or rocks.

* The petaca is a shallow box-like form, made of interlaced hide and capable of indefinite pounding without losing shape.

Heartily tired as we were with the day's journey, the rain which fell heavily during the night, gave us but little concern, and rising with a fine morning got off early to accomplish the six leagues yet remaining in order to reach Oran, the extreme north limit of the republic, which lies just above the tropic of Capricorn, in a lower latitude by some minutes than Rio Janeiro. Soon after starting, our course was arrested by another river, the Santa Maria, and on reaching its further bank, we entered the densest forest I ever saw; not the noble cathedral-like columnar-stemmed trees rising seventy or eighty feet without a limb, and then surmounted by a branched, leafy and floral dome, but an impenetrable mass of entwined, gnarled, fantastic plant development, confusing trunks, branches, foliage and flowers in one inextricable melange from top to bottom. Two growths contributed to this effect, one superior, of massive size and impending, the other inferior and consisting principally of wild orange groves; and here it was I was rather startled by the noise made by the brilliant scarlet-headed and black-bodied Woodpeckers "*Dendrocopus atricentris*" which, after two or three preliminary taps, roll with a speed and force exceeding that of a drum; the natives call them carpinteros (carpenters), but my opinion is that "drummers" would be more appropriate. On approaching the end of their present journey, the poor mules were scarcely able to put one foot before the other, as throughout the whole of the tour, they as well as their masters, had been badly fed: but now as we

debouched upon open ground supported on the right, but at some distance, by low hills and woods, and on the left some leagues off by the formidable range of the Sierras de Zenta, whose peak Monte Zenta rises to the height of 15,000 feet, and very extensive orange groves, containing a few scattered ranchos, directly in front, with Oran discerned on the horizon, the half-famished beasts appeared to scent both rest and fodder and thereupon revived. We halted on the outskirts of the fincas (small farms), and pitched our encampment, gipsy fashion, by the side of a hedge, on a good natural grazing ground, and having seen all things in train, I trotted off into town to deliver the letters of recommendation from the Governor of Salta. The very first missive secured me exceedingly polite attention and lodgings at the house of Don Julio Aguiere, a gentleman who had been resident in Oran for six months with extraordinary powers as government commissioner and revenue collector. To Don Julio alone is due whatever public spirit has originated or enterprise attained, which certainly is but little as yet, owing to the obtuseness, ignorance and obstinacy with which, till lately, his efforts to improve the town have been met. Now however, public opinion has veered round in his favour, and during my stay in Oran, he was elected deputy to the Provincial Chambers, an appointment certain to prove of benefit to his constituency.

CHAPTER L.

1,200 MILES UNDER CANVAS.

CONTENTS:—Description of Oran—My old friends the Blackberry and Elder—Quina-quina chips—Municipal supineness—Petrified wood or bone?—Beer betting—Delicious pastry—Orange loving parrots and toucans—Orange trees never struck by lightning—Plaited-palm Ægis—Bolivian encroachments—The fickle river Vermejo—A mission carried away bodily—A colony abandoned by the Vermejo—A very dangerous swim—A remarkable cotton-tree—Imports preferred to home produce—Indian labour—Friendly barter with the braves—Indian implements and weapons—A novel mode of using the bow—The squaws the better halves.

The town of Oran at one time and not long since was a place of some importance numbering quite four thousand inhabitants, but an earthquake destroyed it in 1871, and again in 1873; subsequent to which, bad government, civil broils, bandits, and other causes, have worked its ruin, so that now it barely counts 1000 souls, in spite of its numerous advantages in position, soil, and climate.

Situated about 250 miles north of Salta, in the midst of vast orangeries, and separated from the Vermejo by a forest ten miles in extent, in which I noticed the Elder, the Palm, and, actually, my old friend the Blackberry, as well as the Quina-quina, which is everywhere found barked for medicinal purposes, since scarce a horseman passes without

taking out his knife and stripping a piece of it off, its central streets are narrow, although the suburbs are laid out in fine squares, with broad roads at equal distances, and crossing one another at right angles. Oran possesses two plazas, one church, and many acequias (irrigating canals), which traverse the streets, and are fed from the river Zenta. The houses are built of adobe, and the town might be made both very picturesque and healthy, neither of which it is at present, owing to extreme public and private supineness. Through political troubles, the municipal fathers have ceased their functions, and so the dikes are allowed to overflow the undrained streets, and the rain to collect in stagnant pools, the consequence is that Chuchu is endemic; and as for any attempt to augment, or at any rate to maintain, the natural endowments of the site, even the planting of a few Eucalyptus trees to adorn and render the neighbourhood sanitary, seems never to have entered the heads of the inhabitants who, although perhaps on the whole the laziest people in the Republic, are nevertheless inventive enough in some things. Thus I was surprised to witness the way in which they transported heavy tree trunks, by means of the bullock cart, not by lifting them up bodily into it, but bringing the lumbering vehicle directly over the log and passing slings round it attached to the cross beams above, they then raised the heavy obstacle about a foot from the ground by means of levers, and having secured it in this position, removed it with ease. Whilst I was on the look out for further displays

of intelligent resource amongst the inhabitants of this remote dependency, I was suddenly appealed to by some of the chief men of the town to decide a controversy, which had been made the subject of bets amongst them, to the extent of sundry dozens of beer, the usual stake of the upper stratum; the important question was whether a petrefaction taken from the bed of the Rio Vermejo, was originally wood or bone, and at least twenty of the disputants met together to receive the verdict and of course consume the malt liquor: bone it was, without a doubt, and the conclusion seemed to give general satisfaction. It was in vain however to attempt to discover in Oran any additional instances of ingenuity save in what referred to the gratification of the palate; for in the preparation of the three chief native drinks they are exceedingly skilful, the Aloja de Maiz, a sweet beverage mentioned before, the Chicha de Maiz, a pleasant and slightly spirituous one drunk during fermentation, and Guarapa from the fermented juice of the sugar cane; nor less so in the concoction of pastry, than which I never tasted superior even in England. On Sunday mornings, arranged at the corners of the Plaza, may be seen a few tables nicely spread with clean linen cloths, on each of which a roll of dough and a large wooden bowl of ingredients stand ready for the manufacture of the empanada or meat pie, whilst a fire at the rear with necessary pans is provided to cook in the presence of customers the universal Sabbatic breakfast in this part. The bowl contains finely-chopped fresh meat, various

saporific herbs of course including *agi*, and powdered hard boiled eggs, the pastry after being sweetened with sugar is rolled as thin as a wafer, and then the whole fried in butter, nicely browned and sprinkled with sugar: the *empanadas* which I had tasted in other parts of the republic were invariably of thick paste and baked: and the contrast was manifestly in favour of those of Oran. To inspect the ingredients and watch the whole operation, added appetite to what was really in itself a very savoury and deliciously cooked morsel.

Notwithstanding that the only great natural feature of the place is its orange groves, when I arrived in Oran, not a single one of the luscious pulps was to be had for love or money, as a plague of parrots and toucans, orange loving birds, had actually swept off all gleanings from the harvest. Usually the crop is sold in advance to Bolivian merchants, who come down thence to harvest them, since in the southern parts of that country, which are mainly desert, the fruit cannot be grown; and on an average seven millions of the golden apples go hence to moisten the dry palates of their northern neighbours.

The orange harvest lasts from July to September or October, and Chaco Indians are employed to gather it: the usual retail price in Oran is about ten for a penny, and one tree will yield 1,500; but so abundant is the fruit that it forms the usual candlestick, and at the season of any great festival, dips stuck in oranges appear at every door and

window: banana trees likewise yield very prolifically in this district.

A conviction is current in Oran that orange trees are never struck by lightning, and considering the infinity of such in the neighbourhood, and the prevalence of electric storms during six months of the year, when other trunks are commonly the victims, there seems to be some probability in the persuasion; which was further substantiated by the testimony to that effect of Dr. Aguiere, who has had many years' experience in the territory. Not however to this *Ægis* alone do the superstitious inhabitants trust, but they commonly insert, for the same purpose, a piece of plaited palm in the *rejas* (bars) of their windows, which they renew on each successive Palm Sunday.

The marches of Oran, measuring between 50 and 60 leagues from north to south, and about 60 from east to west, are extensive enough to form a province of themselves, yet they remain a dependency of Salta, under a Lieutenant Governor appointed by the authorities there. The encroachments of Bolivia on the north, whereby that country has become possessed of the fruitful and rich province of Tarija, have never been acknowledged so far by the Argentine republic, and as that district abounds in magnificent forests, splendid pasture lands and many promising petroleum springs, some day it will form a bone of contention between the two republics. The consecutive Argentine governments indeed have exhibited throughout a reprehensible supineness on the question of limits,

whether with Chili, Bolivia, Paraguay or Brazil, and this is the more to be regretted, as such points of controversy become burning by deferred settlement.

Oran is capable of perfect irrigation throughout its entire area, being watered by numerous streams, the principal of which is the Rio Vermejo, or Red River, so called from the ferruginous soil through which it tears a channel; a very remarkable river that, taking its rise in Bolivia, disembogues into the Paraguay. At certain seasons, that is every flood, this impetuous current is navigable as far as Rivadavia, the chief town of the next department, likewise belonging to Salta and lying in the Gran Chaco five days' journey S. E. of Oran; and with suitable steamers built for the purpose, and the exercise of a little engineering skill, might be rendered so all the year round. No map however as yet gives the correct course to this meandering and inconstant river, nor is this to be wondered at, as it is, or rather was, continually changing it, but at last seems to have settled down for a time to one channel. At one period it would scoop out and occupy one bed, at another be found leagues away, and by suddenly altering its direction in the years 1872-3, carried away the Mission of Trinidad bodily: so the Teuco which, seven years since, was leading a peaceful semi-independent existence, as a tributary on the left bank of the Vermejo and flowing into it a few leagues above the colony of Rivadavia, had at that time its channel gradually invaded, and now for the last three years has been completely

expropriated by the main stream which, leaving its original bed completely dry, curiously enough abandoned Rivadavia, that formerly hugged the left bank, and banished it to a distance of five leagues to the right; a very serious matter for the colony, as it is thus deprived of water, as well as of much of its former anticipated commercial importance. This new course along the bed of the Teuco seems to re-enter the old stream of the Vermejo, about half way from Rivadavia to its confluence with the Paraguay, that is a distance of some hundreds of miles further to the south-east, and this new channel, not so fickle as the former and less dangerous from shifting sands, is preferred by the steamers that now annually visit the neighbourhood of Rivadavia.

The Vermejo however opposite to and above Oran is nothing but a lashing, foaming mountain torrent, bringing down boulders and tree-trunks at a terrific rate; seething waters that my assistant was foolhardy enough to swim across, to the imminent danger of his life.

The whole aspect of the territory of Oran is one of extreme fertility, of universal verdancy; not only are her meads intensely green, but her very hills, and yet all is lying idle awaiting the good time, when the canalization of the Vermejo and the locomotive, shall stimulate her acres into productiveness and provide outlets for their yield. All the tropical fruits, vegetables, plants and trees grow here to perfection; rice, tobacco, sugar, mandioca, coffee, cotton, mani, saffron, oranges, bananas and chirimoyas, whilst indigo grows wild in abundance, and

whole tracts are covered with the *Opuntia*, filled with the cochineal. I saw one small plantation of about a hundred very fine coffee plants, just about to bear the berry, the property of an enterprising gentleman who has tried the experiment before with the very best results, obtaining coffee of a quality almost equal to Yungas. Cotton seems indigenous and in its natural state reaches an extraordinary arboreal growth. One tree, thirty years old, the admiration not alone of botanists, but of every one who saw it, measured twenty-four feet in height, nine inches in trunk diameter, and had a spread of about the same extent as an orange tree, and when laden with flowers was an object of extreme beauty; however some ignorant, communistic, roundheaded iconolast, actually went and cut it down. As to the wealth in forest timber, of the finest for every purpose, not alone for manufacturing and art purposes, but for medicine, it is simply amazing; two or three species of *Cinchonas* are here found as well as an infinity of curative and culinary herbs. The mountain ranges teem with gold, silver and copper, whilst the sand of their streams are highly auriferous, and in some parts kaolin and petroleum are both abundant. And yet with all these and other home treasures, which a modicum of industry would convert into active riches, the natives, although they can command a never failing supply of Indian labour, prefer to pay high prices for inferior commodities imported, rather than rely upon their own boundless natural resources: as an instance, the "aji" or Chilian pepper of which they consume an inordinate

quantity, is extensively introduced from abroad, although the fact remains that this fiery pericarp grows wild and in profusion all over their own camps, nay almost close to their very doors, needing only the exertion of collecting, and yet it flourishes unheeded.

As this territory abuts on the Gran Chaco westwards, to which in fact it lies open and is continuous, and moreover includes a very fertile and extensive tract of its Boreal part, on the other side of the Vermejo, a region of dense forests and meadows, well watered by innumerable streams, an unlimited stock of present and future Indian toil lies within call: true it is that some of the superior tribes are still warlike and untractable, but the Matacos, a friendly and half civilized, but an infinitely dirty and inferior people, are at hand and always willing to engage throughout the provinces adjacent to the Chaco, although their services are costly. There may be perhaps altogether in the Chaco Boreal and Austral about 50,000 Indians, distributed amongst twelve tribes or so, of which possibly 10,000 are now available for work. The Matacos invade Oran periodically on the look out for employment, but when the forests around are in fruit, these children of the wilderness invariably betake themselves thither, to feed upon the pericarp of the Chañar and the legume of the Algarrobo, and to drink the intoxicating Aloja made by their squaws. I had the pleasure of passing through the forests in their midst, and although they are always armed with short lances, bows and arrows, and could

have made mincemeat of our small party in a trice, they offered no violence, but on the contrary I was able to effect a little friendly barter with the braves, by exchanging some old clothes for their arms and cuirasses.

The bows of these Chaco Indians are about six feet long, and made of a wood resembling Yew, called Iscayante (a species of lance wood), and like that of William the Norman would tax the strength of most Europeans even to bend in the ordinary way. The Chaguar (wild pine apple), one of the Bromeliaceæ, a low prickly plant of about three feet high, that renders one hundred square leagues of the Chaco impenetrable to man and beast with its dense thorny leaves, and yet adorns the space with its large, waxen, campanulate, scarlet and white flowers, yields a fibre tougher than Manilla hemp for the construction of bags and cuirasses, whilst their bow strings are formed of the hide of some animal whose name they will not reveal, but which I suspect is the carpincho.

These bags the Indians render elastic or not at pleasure, according to the way in which the threads of the meshes are disposed; some apparently only capacious enough to hold a quartern loaf, can be made to enclose a load for a horse; whilst others destined to contain their babies or other treasures are usually of a non-elastic texture. In the mail-tunic, the meshes are closer, and having put it on, they proceed to pad it both before and behind with the cottony down of the Palo borracho, then rolling their dusky persons in a shallow pool of water, the

whole covering is at once rendered arrow-proof. The posterior padding, by no means a sign of cowardice, serves another purpose, namely as a pillow to support their bodies when they lie at full length on their backs to discharge the formidable arrows, an invariable custom when they engage an enemy at some distance. The bow is then pulled by the two feet and hands, and Robin Hood's ranges are equalled in extent and exceeded in accuracy; indeed to witness their skill with the bow and arrow, in this and other positions, seemed to me almost miraculous, as they not only kill birds on the wing, but strike fish unerringly in the water.

The arrows are of various kinds, and of different lengths, to suit sundry purposes, whilst those for human warfare are generally poisoned, and are always constructed in two distinct parts, the lower of reed or cane, the upper of lance wood, tipped sometimes with spear-shaped heads of exceedingly hard wood, at others with jagged of the same material, and lastly with bone. For killing fish, the arrow head is formed of bone sharpened to a barbed point and carrying a string, which on striking the fish is disengaged, and so they haul their prey to land.

The filthy Matacos have learned from Christians that Sunday is a day of idleness and the mischief predicated by Dr. Watts is the result; for not only do they imitate their masters in abstinence from labour, but proceed to get drunk and then invariably set to work and fight, men and women together in one general *melée*. The women however are no

mean antagonists, as they are veritable Amazons ; in fact, among all anthropoids, not even excepting the gigantic negresses at Bahia or the Patagonians, they possess the finest development, splendid, upright, tall, broad-shouldered, lithe and muscular forms, for whom the comparatively puny-looking males are no match. I saw a pair rolling together on the ground like tigers in the public square of Oran, and the woman got the best of it, the man having to slink away thoroughly thrashed: yet under ordinary circumstances, when not intoxicated, these better-halves may be seen silently following their lords and performing, as is customary amongst Indian tribes, most of the hard work, especially carrying heavy weights accurately poised on their heads, to which much of their magnificent development is probably due.

CHAPTER LI.

1,200 MILES UNDER CANVAS—THE GRAN CHACO.

CONTENTS:—The demands of civilization—Jupiter's heaviest thunder-bolt—Indifference of Argentines—Expeditions into the Chaco—The sepulchre of missionaries—Don Angel Peredó—Don Estevan de Urizar and his scruples—Don Joaquin Espinosa—Don Juan Manuel Campero—The sad lot of eighty men—Don Gerónimo Matorras and his designs—Arboreous annals—Cowards' camp—Paikin and his reception—The conversion of the Caciques—Matorras and his officers in tears—A treaty of eleven clauses—Sierras 48 miles high—A viper with two heads, one at each extremity—Pearl oysters—Hairless tribes—Dwarf tribes—Indian Vandalism and dreaded hieroglyphics—Spearing fish with swords—The fall of a fiery meteor—Climate of the Gran Chaco—Fauna and flora—'Tapirs' claws a remedy for heart disease and epilepsy—A description of the cayman—The fat of the cayman a cure for "San Lázaro"—The leaves of the vinal a sure cure for cataract—Palo santo, a true catholicicon—An infallible antidote for venomous bites—A wild cotton plantation six miles in extent—Extraordinary gourds—A list of the principal Indian tribes—Drunkenness *versus* Long life—A semi-religious tiger-festival—The treatment of smallpox victims.

Great interest attaches to the Gran Chaco, as one of the few remaining unknown mundane regions, and one of the last vast homes of the pure wild Indian. Already longing eyes are turned thitherward to demand from the dusky nomad, in the name of civilization, the almost limitless acres of his forefathers, whose resources have hitherto lain dormant, save to supply a field for the untutored skill of the savage and a spot whereon Jupiter might discharge

the heaviest of his thunderbolts. But although the South American Indian possesses but few noble traits, and therefore enlists little sympathy on the part of the native statesman or politician, who view his speedy extinction with satisfaction as a national necessity, there are hearts philanthropic enough to attempt to rescue him from such a fate, and by raising him to the level of civilization through the medium of the gospel, bid him reenter the brotherhood of nations, from which he has been so long excluded by the cupidity, pride and cruelty of his Latin subjugators; and such are the benevolent sentiments and intentions of the good bishop, who at present presides over the destinies of the Anglican Church in South America. It was however only under the old vice-regal regime, when this country drew its inspiration from Kingly Spain, that any serious attempts were made to explore and subdue this vast region. Since they gained their independence, the Argentines surfeited with territory, and overwhelmed with political squabbles, have exhibited such indifference to the Gran Chaco, as to permit geographers actually to style it a desert.

I have before me the very rare accounts of several expeditions into the Chaco, undertaken in the years 1774 and 1780, the chief of which was under the command of Matorras, Governor of Tucuman, whose diary written in Fullerian Spanish, causes the reader much amusement by its quaintness and simplicity, but at the same time reveals such sincere faith and humility, as to offer great contrast to the spirit of modern Argentine officials.

In the preamble he declares "The Chaco has been for a long period the sepulchre of the missionaries. The fathers of the Society of Jesus, who had obtained such remarkable success in their Paraguayan propaganda, flattered themselves that they would be able without assistance to accomplish the spiritual conquest of the Chaco, and so spent a century without obtaining any other advantage than swelling the number of their martyrs. So much blood cruelly shed, so many dangers uselessly suffered, at length fired the zeal of the governors, who hereafter took an active part in these undertakings."

Don Angel Peredo, Governor of Tucuman in the year 1670, was the first to organize various expeditions to inflict severe punishment upon the marauding Indians, who had invaded and desolated Jujuy and the neighbouring provinces. One of his immediate successors Don Estevan de Urizar, a model of such unaffected piety as is unknown in later times, before proceeding to make war upon the barbarians, referred the question of its lawfulness to a junta of theologians assembled in Lima, whose consciences were not troubled with any of the scruples attaching to Don Estevan's. An expedition with 3000 men was accordingly undertaken, but fruitless in result, as were all the early ones. After the death of Urizar in 1724, various other bootless attempts to subjugate the Chaco tribes were hazarded, until Don Joaquin Espinosa, Governor of Tucuman, entered that region in 1759 with a hostile force of 2500 men, principally for the purpose of opening direct communication across it, with the provinces of the

Paraná. In this however he did not succeed, any more than did Don Juan Manuel Campero, the next Governor of Tucuman, who in 1764 foolishly sent a detachment of only 80 men into the Chaco for the same purpose; which insignificant body of troops, with ammunition reduced to two rounds per man, soon found themselves surrounded by an advanced guard of 700 fierce Indians, and though saved from torture and death by the intervention of a friendly cacique, rejoicing in the sonorous name of Colompotop, were stripped of everything and reduced to slavery.

Such was the state of affairs when the active, brave and ambitious Don Gerónimo Matorras, installed as Governor of Tucuman by Royal mandate in 1769, conceived a vehement desire for some great enterprise, and although no more than \$12,000 (£2,500) were found in the royal treasury, bound himself by contract to pacify the Chaco, under a fine of \$50,000. Accordingly in 1774, with a nominal force of only 508 volunteers, which was further reduced by desertion to 378, with 600 mules, 800 horses and 1200 oxen, did this determined chief, accompanied by three ecclesiastics, a canon, a Jesuit missionary and his chaplain, set forward on the politico-religious expedition; and wherever the cavalcade halted, there the soldiers immediately commenced to carve on the trees the double banner of the arms of Castille and the Stole of San Francisco Sola, the chief apostle of the Chaco. Little or no discipline was however maintained on the route, so that on arriving at the Tren de Espinosa, on the

Paraná, the small remnant of this expeditionary armament, was again still further diminished by desertion, a fact which Matorras stamped with infamy by giving orders to inscribe on the tree trunks "Acampamento de los cobardes" (cowards' camp): in every one of the enterprises indeed, the same method was employed to chronicle events. Nevertheless this untoward accident did not deter the commander from advancing his reduced company northwards to Lacangayé, where he had a formal interview with Paikin, the formidable cacique of the Mocobis, and the most noted chief of the Chaco, in which, Matorras, seated on a chest covered with hides, and a grenadier's cap on his head, received the powerful Paikin beneath a canopy of blankets and delivered to him the wand of authority, at the same time proclaiming him the "faithful vassal of the monarch of Spain." On the following day in an assembly consisting of Paikin, Lachirikin and many other caciques, the mysteries of the Catholic faith were unfolded to these children of the wilderness, and, let us hope, with more clearness and success than the Friar, that accompanied Pizarro, did to unfortunate Atahualpa, who must have had a very confused notion of their creed, when the interpreter declared to him that the Christians believed in one God and three Gods, and that made four. Then erecting an altar and carving a crucifix in the stem of the overhanging tree, the *Te Deum* was entoned, Paikin and his bloody warriors kissed the emblem of peace and remained kneeling with the Spaniards above an hour, during which time Matorras embraced

the reverent cacique and threw around his neck a crucifix, returning thanks to God for the conversion of these cruel infidels. The whole of this impressive scene caused the Spanish general and his officers to be bathed in tears of gratitude, and immediately on its conclusion, the trunk of a noble but grotesque-looking vinal (*Prosopis ruscifolia*) was selected whereon to grave the date of the Indian conversion, and of the treaty of eleven clauses entered into on this occasion between Matorras, Paikin, and all the other chief caciques.

Opposed by his subalterns in the design of prosecuting the plan of Espinosa and reaching Corrientes, as well as in the alternative of examining the northern shores of the Paraná on rafts, Matorras returned to Salta, and whilst projecting a fresh expedition, died.

The diary of this adventurous but credulous explorer reveals some points rather startling both to the geographer and naturalist: in it he mentions the Sierra del Alumbre, as attaining a perpendicular height of 48 miles; and that he had remarked a vibora (viper) with two heads, one at each extremity, so that whichever way pursued, it could retreat without turning its body, most probably by the possession of some internal reversing gear; that the Chaco abounded in the Pearl Oyster, and gold was washed down in abundance from the Sierras of Centa; and that the caciques had promised to bring him the following season two adult males and two females from each of the tribes dwelling to the north of the river Vermejo, whereof one race was perfectly hair-

less and the other dwarfs no higher than three feet.

Numerous were still the deserters from the body of volunteers that accompanied Matorras, many the dire portents met with of previous failures sculptured on tree trunks, and of which the majority were almost illegible by reason of the Vandalism of the Indians, who evidently dreaded the cabalistic nature of these hieroglyphics, and sought by obliterating their significance to destroy all their incantation. Nevertheless through all obstacles, these brave men continued to advance, fortified daily by the rites of the Church, and supported by simplicity of character, purpose, faith, and devotion to San Bernardo the patron saint of the Chaco; so that, by conciliating the different savage tribes with presents of clothing, glass, beads, &c., their numbers were continually increased by multitudes of Indian followers who, stimulated by the gifts, aided their design, and at last they were enabled to reach the shores of the Vermejo, through almost impenetrable forests of Palm, Algarrobo, Palo Santo, &c., interspersed with beautiful prairies and lagunas. On the shores of some of these lagunas, fish were so abundant that the soldiers speared them with their lances and swords, and in one they killed a cayman which measured twelve feet in length. A fiery globe of enormous size, probably the huge meteor whose remains still exist in the Chaco, was seen to fall and plunge into a fœtid sulphurous lake, causing intense terror amongst the Indians, but I suspect not less among the Spaniards. Speaking of the physical characteristics, fauna, flora and races of this im-

mense territory, the diary of Matorras remarks, that the districts of the Gran Chaco alternating continuously between forest and meadow land, everywhere refresh the sight, and in the period of greatest heat, the atmosphere is always tempered by an invigorating south wind; that the Vermejo is navigable from Tarija to the Paraná, and is everywhere too deep to be forded, but that its waters possess great medicinal virtues and abound in seals, gigantic caymans and fish, such as the dorado, boga, surubí, pacú, palometa, dentado, bagre, sábalo, sardinia; besides the tortuga (tortoise), and ostra de perla (pearl oyster). With regard to fowl, they are abundant in all parts, and comprise the paloma, tórtola, pato, papagayo, pavo, charata, cardenal, calandria, cigüeña, bandurria and toucan. Among the numerous wild animals were pumas, and Commander Arias earned the reputation of being a first-class lion shot, jaguars and bears, jabalís (wild boars), deer, foxes, corzuelas, nutrias whose flesh the Indians eat, using their skins for clothing, the Gran Bestia (Tapir) of the size of a young ass, whose claws are especially serviceable as a remedy in heart disease and epilepsy, but the observant explorer does not say whether they are to be swallowed whole or not; monkeys of different species, especially a little red ape, the male and female of which both wore a beard like the goat, hares, rabbits, coyces, quirquinchos, serpents attaining a length of nine feet, some of which had two heads, ampalabas, spiders of formidable proportions, ugly esquerzos and venomous toads, and abispas of terrible ferocity. With regard to the

caymans, Matorras observes, that within the teeth of the upper jaw is found a musk gland and at the extremity of the body another, the whole animal being encased in a very strong and thick shell, which only the musket balls from Commander Arias's gun could penetrate, that the under jaw is immovable and consequently mastication is performed by the upper, that the viscera became frigid as soon as the dangerous reptile was killed and opened, and that its fat proved a complete cure for that filthy disease called "San Lazarus."

The dentritic flora, as described by Matorras, comprehended the quebracho, algarrobo, tipa, sauce (willow), álamo blanco (white poplar), sangre de drago (dragons' blood), forests of palm extending 25 miles and reaching a height of 75 feet, quina-quina, the vinal, a mimosa armed with monstrous thorns six inches long and strong enough to be used as awls, and whose leaves masticated fasting and the pulp applied to the eye is a sure remedy for cataract and all other ophthalmic disorders, Palo-borracho, Guayacan (*Guaiacum officinale*) whose wood when kept in water becomes petrified and ultimately converted into iron (?), Palo santo, one of the Zygo-phylleæ, of specific gravity 1.5, a remarkable tree rising to the height of 60 feet and maintaining throughout the thickness of a man's thigh, with virtues that entitle it to be styled a true catholicon; whilst the more noticeable of lesser growth were the Contra-yerba (*Dorstenia contrayerva*) a wort, that is an infallible antidote to the venomous bite of all poisonous animals, an indigenous cotton plan-

tation six miles in extent, and gourds of such extraordinary dimensions as to serve the soldiers for storehouses of the wild honey found in such profusion on the trees.

The principal Indian tribes that inhabited the Chaco, and all speaking different languages, were the Macobís, Tobas, Mataguayas, Malbalaes, Chiriguános, Chunipíes, Guaycurus, Abipones, and Lules, of which the Macobís and Tobas were by far the most numerous; in fact the three last were not met with at all in this expedition. The means of living for all this numerous host are very abundant, and not less so the opportunities for indulging in their favourite vice, drunkenness, a depravity that does not however appear to shorten their lives, which commonly extend to five-score years.

These savages seem to possess no conception of a Deity, for no god do they worship; their whole idea of existence rests in the present life, the men doing nothing but reserving their strength for war and the chase, the women doomed to the slavery of hard labour, and waiting upon and even feeding their lords. But two most extraordinary races, which the caciques Paikin and Lachirikin assured Matorras dwelt 60 leagues farther north, were, the one of ordinary stature but completely hairless as well on the head as the body, and the other a tribe of dwarfs three feet high, which on account of the swampy nature of their territory were obliged to live in trees; and to the surmise hazarded by Matorras's party, that they were monkeys, the Indians indignantly replied, that they were without tails and frequently

mixed with the surrounding savage nations, whose languages they understood.

One of the principal Chaco Indian semi-religious festivals is very logically dedicated to the tiger whom they fear, and whose depredations are very considerable. Into a large open space are dragged two thick tree trunks, and after having been deprived of their bark, these are driven perpendicularly into the ground. The worshippers then paint on the smooth surfaces various figures of the beast in different attitudes, and then proceed to dance and drink for some days around the rude altar, uttering all the while lamentations, cries and prayers to the fierce jaguar not to seize their children. This ceremony invariably degenerates into universal intoxication, free fights, wounds and deaths.

The only evil for which they have no remedy, and which they dread excessively, is the small pox, so that those who are seized with it, are abandoned exposed to the inclemency of the weather, with a little food by their side, whilst their friends (?) remove the tolderia and allow the smitten to die; they return only to find a heap of bones, for in the mean while the wild beasts and birds have been busy with the remains.

Such is a condensed history of the diary of Matarras, as rendered to His Catholic Majesty Charles III. King of Spain. Two other subsequent expeditions through the Austral Chaco, one by Cornejo, in which he succeeded in tracing the Vermejo near its source, the other by Morillo in the same year,

gave birth to tedious narratives detailing nothing but marches and countermarches, with little or no incident; so that almost all that is even yet known of the Gran Chaco is contained in the account of Matorras which, when shorn of the marvellous, reveals the truthful, pious explorer who, with slender means and but little other assistance, prospered in his design of pacifying the territory and converting its wild inhabitants to Christianity.

CHAPTER LII.

1,200 MILES UNDER CANVAS.

CONTENTS:—Oran as a zoological field—Oran as a residence—A government official with despotic power—Medicine an antidote for assassination—Revolvers at dinner—A system of espionage—A distrain—Border cattle-lifting—Lost mules and their rescue—A visit to the Vermejo—Expelled from the forest—A nightmare of difficulties.

Oran, although rich in mineral and vegetable resources, and blessed with a very hot though benign climate, is by no means gifted in fauna save in vermin, whereof the Garapata for the body and the Pique for the feet are so troublesome as to render life almost insupportable, in spite of the good character it bears generally amongst zoologists; nevertheless, during my short stay of fourteen days I was fortunate enough to discover one new species of bird, which henceforth will bear the name of *Synalaxis Whittii*, besides filling my bag with some other rare forms, amongst which, the pretty little chocolate-coloured dove *Chamæpelis talpacoti*, the funny and tiny woodpecker *Picumnus exilis*, and the gaudy parrot *Conurus flavirostris* were perhaps amongst the choicest. Indeed, after the first blush, the lawless territory of Oran did not strike me as a very desirable residence, as communication with the outer world was almost cut off by reason of

absence of roads and telegraph, mitigated only by an irregular bi-monthly postal service. Further, apart from the plague of insects and vampire bats, the intolerable heat and the many dire diseases rife, the endemic goître supposed incurable, the chuchu, typhoid and small-pox, certainly under the control of man and needing only serious efforts to stamp out, but viewed with absolute and fatal apathy, yet another source of inquietude oppressed me, arising from distance from central authority and consequent absence of control and general insecurity.

Doctor Don Julio Aguiere, my host, was an old army surgeon though a young man, who had been invested by the Salteño government with despotic power, especially for the purpose of collecting the imposts due to that government which, owing to the general lawlessness of the district, had remained unliquidated for many years. Although fearless, he was well aware that his life was in continual danger and indeed would have been sacrificed long since, had not even his somewhat limited acquaintance with medicine rendered his existence an absolute necessity in a land where the faculty is as yet unknown. For self-preservation therefore, he set up a botica (apothecary's) wherein to dispense drugs and give medical advice, but at the same time maintained a corps of spies, who put the whole society of Oran under the secret ban of espionage. One evening as we were sitting at dinner, in crept a member of the fraternity announcing that some hundreds of adherents were gathering at the colonel's, a rough, powerful, uneducated half-

Indian, who had held that grade in the army, but for some time had settled down as an estanciero. This man having lately been fined for non-payment of taxes, had thus been rendered a bitter foe of the Government commissioner, and a meeting of his partisans* was in consequence summoned to make arrangements for attacking the premises and assassinating the person of Don Julio. We immediately ran for our revolvers, placed them on the table and awaited events, not forgetting to inspect the powerful bell which, as an additional precautionary measure, Doctor Aguiere had hung to use as a summons to the three or four solitary police at his command, as well as to the townspeople whom he had the right to impress at any moment as National Guards. Fresh spies were despatched to the scene of disaffection, but they were not allowed near the spot; however the courage of the revolutionary party seems to have evaporated in words, as all passed over quietly for that time, but during my residence under Zacchæus's hospitable roof, I was in continual alarm lest the dwelling should be sacked and ourselves sacrificed.

On another occasion this active deputy raised a corps of twenty men, armed with rusty swords and antiquated flint muskets, in order to make a raid and distrain upon an estancia, whose owner had refused for years to settle with the government. Instructions were issued to seize and bring away

* Much as in Europe during the middle ages, every person of any consideration in Oran, has a multitude of such ever ready to do his bidding.

500 head of cattle, to be sold by auction in the public plaza, but as seven or eight shillings only is the usual market price of a beast, and even less at a sale of this nature, the whole represented no very large amount. The legal emissaries surprised the estancia and quickly gathering together the required number of beeves, proceeded to set off homewards, a distance of thirty leagues: but no sooner had the estanciero notice of what had happened than summoning and arming his hinds and retainers, to the number of 200, he hastened in pursuit and by threatening a pitched battle, rescued his property from the clutch of the sheriff's officers. Upon this the government delegate made preparations to levy an army to besiege the barony, which quickly brought the debtor to his senses, so that coming into town a few days after to discharge his liabilities, he found himself, to his utter chagrin and indignation, further burdened with a fine of one thousand patacons (£200), for withstanding the legal authorities.

As a further indication of the general spirit of lawlessness reigning in Oran, horse and mule stealing especially, and in a lesser degree cattle lifting, are extensively and openly practised. The Bolivian frontier being only removed a day's journey northward, and no extradition treaty existing between the two republics, there is every facility for a safe illicit trade in stolen animals, by their speedy transport across the frontier. Animals thus once lost are never recovered, neither are the thieves prosecuted, and in consequence of this immunity they

become so bold as actually to filch horses from the public plaza, where on account of the abundance of grass, and the seeming security, they are usually let loose to feed.

Nor are the Argentines the only culprits in this illegal traffic, for the Bolivians, with equally favourable opportunities, are not slow in reciprocating a compliment which tends so manifestly to the mutual advantage of both sets of these precious border robbers.

As we were anxious to see the Vermejo, one day, in company with Dr. Aguiere, we started on muleback to penetrate the ten miles of dense forest, which intervenes between the town of Oran and that truly red river, with the intention of remaining on its banks a week or more for the purpose of hunting and fishing. A simple bridle track necessitated Indian file, and although the forest rang with the varied notes of birds, we saw but few amid such dense foliage, but butterflies were numerous to view. The undergrowth interested me from the abundance of ferns, blackberry and elder bushes, and one species of red fruit, the Piquillin (*Condalia microphylla*), not unlike a currant in form and flavour but more astringent. About a mile before we reached the banks of the river, in the midst of a small cleared area, stood a wood-cutter's rancho, at which we stopped, and there we erected the tent. Dr. Aguiere led the way to a small, but very picturesque affluent of the Vermejo, into whose deep stream we descended, passing up it in a zig-zag from sandbank to sandbank, as it was not possible to climb its banks

which were very steep and covered thickly with the bramble in fruit, and densely wooded to the water's edge. Here we saw some lovely Kingfishers (*Ceryle amazona*), which passed and repassed us several times, but we were unable to steady the mules for a shot. On returning to the rancho, Señor Aguiere left us for Oran, promising to return in a week with a large party to organise a tiger hunt, as the wood cutter had lately tracked a very large one, which had already carried off some of his animals. We then set off for the Vermejo, along an almost impassable track, in which many heavy blows were received from the unyielding branches, and more scratches from the grotesque looking vinal (*Proso-pis rucifolia*) with its monstrous thorns, carrying with us apparatus, fishing tackle and arms, on which journey many beautiful butterflies were captured and birds slain. Just before reaching the banks, a deserted rancho appeared, and there stood outside a cart which, abandoned not ten years since, had been appropriated by a denizen of the forest that had pushed up its magnificent stem completely through its flooring, a brake far more effectual than had ever been applied to it when in use. The forest lined the very banks, and thick cane-brakes the immediate shore, when casting our eyes over the waters, we were astonished to see a stream impetuous enough, but scarce 300 yards in breadth, in whose bed, as it was low water, appeared sand banks here and there, between which rushed the encarnardined flood. A cayman was quickly observed as he floated rapidly down the current; notwithstanding we

bathed therein, and on emerging from the water, the whistle of a tapir was heard among the cane-brakes. I hastened up the bank and plunged into the thicket for a shot, but lost both him and myself, as extrication from the dense maze was a work of great difficulty. Ducks and geese were abundant, but very wild, and fish numerous but not inclined to bite. The opposite banks, likewise well-wooded, were backed up by hills seemingly of considerable height.

In the afternoon we returned to the encampment, and as we had been so horribly persecuted during the day by insects, with something like apprehension made arrangements for the night. In other parts the garapatas were satisfied with tormenting us by day, but here the chance of leeching a gringo, so seldom enjoyed, kept them and a host of assistants at the game all night, so that we did not sleep a wink and were glad to saddle up next morning and return, literally expelled from the forest. On our way back we captured a solitary snake; and it was a matter of great surprise that during our six months' tour in a region credited as the home of the Ophidian, four only were seen and two captured, although we were constantly on the watch for them.

One day shortly before we left Oran, the peon with the classic name had a quarrel with my assistant, during which the latter foolishly drew his revolver upon his adversary and caused me the loss of his services. A new one was obtained, but the day preceding our departure, as usual with the class,

he got intoxicated, and in consequence two of the mules could not be found, although he assured me they were all safe in a corral. I at once gave them up for lost, well-knowing that if such were the case, a further residence of six months in the place would be the inevitable result, as there was no possibility of replacing them there, at any rate in time for our return journey, neither could our heavy luggage be transported in any other way. At once engaging all the trackers I could to hunt them up, and spending almost the whole day in the saddle myself, I searched every hole and corner in and around the town without success, when up rode a gentleman saying he had seen them about three leagues away in the neighbourhood of a dense wood; so off we posted at full gallop and luckily caught the vagabonds just before they disappeared within the bosky precincts which, if they had once entered, would have concealed them from our view for ever.

The rainy season had already commenced, and I was well aware that there was no time to lose if I intended to return by land from this the very northern verge of the republic, as for six months of the year, that is from November to March, these extreme upper provinces are virtually sealed to the rest of the country by impassable rivers. This fact it was indeed that hung as a nightmare over my imagination all the way up from Andalgala, where the lateness of the season caused me to be so apprehensive of being imprisoned for a semester by the impetuous torrents, that the enforced hurry which characterized all our movements, necessarily augmented

considerably the hardships of the trip, and deprived me at the same time of the opportunity of investigating much that I had desired. Thanks to the governor of Salta, I carried in my pocket two free passes for Buenos Aires by the exploring steamer, which was now due at Rivadavia on the banks of the Vermejo, but as that colony lay at a distance from Oran of five days' journey on mule-back, and there was great uncertainty whether she would be able to reach that point,* and if not, the extra delay caused by a bootless expedition thither, would infallibly render nugatory any attempt to return, I decided at once to retrace my steps *viâ* Salta, thence along the eastern, instead of the western, flank of the Aconquija range to Tucuman, and so downwards home.

* The unfortunate steamer was wrecked in the lower Vermejo.

CHAPTER LIII.

1,200 MILES UNDER CANVAS.

CONTENTS:—A population turning out *en masse*—Departure from Oran—The Santa Maria—The Rio Colorado—Difficulties of crossing—Rio de las Piedras—Tapir and Tiger Shooting—A swollen river and its dangers—Campo Colorado and its accommodation—Dressing on horseback—A hammock and its drawbacks—The Rio Sora—Rio San Lorenzo—The fate of a poor postman—A covetous comisario—Rio Ledesma—Edible fruits—The Chañares and greedy Indians—The Rio Negro Perils—Rio de las Pavas—Exhausted mules—Rio San Pedro—A powerful swimmer almost carried away—Mode of passing a disabled mule over a torrent—Henry Durnford—Rio Mojotoro—Recording the ebb—Fly-catchers very bitter—An English landscape—A view of Salta—Bucephalus well sold—An interview with the Governor—Mines offered on halves—A nightmare of rushing waters.

As at Andalgalá, so at Oran, the population turned out pretty well *en masse* to bid us good bye, and after sundry stirrup-cups we started, in the midst of heavy rain which continued more or less throughout the whole journey to Salta, not only glad to get away from the intense heat and chuchu of which, notwithstanding daily doses of quinine, we had sundry monitory symptoms, but from the intolerable plague of insects, which could scarcely have been exceeded in intensity by that recorded in the reign of obstinate Pharaoh. Owing to the bad pasture in Oran, our animals were tired and very thin to begin with, so that we looked nervously

forward to the ten wide and deep torrents that lay in our path, and which it was necessary to cross in order to reach Salta.

On we went plashing our way leagues upon leagues through water up to the mules' knees, soaked by the rain and drenched by the heavy dropping from the forest leaves, until we sighted the first of them, the Santa Maria, a tributary of the Vermejo, and on approaching its shores we found it had not yet risen so much as anticipated, and as the downpour had now ceased, we encamped on its very sands, a drier but very insecure place, and passed over in the morning, though with considerable difficulty; but the second, the Rio Colorado, and affluent of the former, with its broad, rushing torrent and shifting sands was almost too much for us. As it had overflowed its banks so greatly, the channel or rather channels, for most of these rivers have more than one, could not be perceived; a rancho however stood near the further bank, whose owner possessed a raft, and on the nearer we remained, making signals and shouting till we were hoarse, but as the people took no notice, the deep passage had to be hazarded: so sending a man in advance, on an unladen mule to ford, we dashed into the flood and attempted to cross one by one in his track, but precipitated into the river bed, floundering into holes wherein animals and riders were instantly submerged, descending unexpectedly into quicksands where, if the mule be not at once lifted up and swung round, all is lost, almost swept away every moment by the terrific current, treading

on slippery boulders and sliding off again to release them on their downward rush which threatened to break the mules' legs, enveloped in foam, breathless and panting, the very life washed out of us, we fully expected to be drowned, as less than feathers in the hand of a giant were both horse and horseman.

We now proceeded on as fast as our exhausted mules would permit to the Rio de las Piedras where was a sugar factory, whose owner turned out to be an old friend whom I had known in Buenos Aires and elsewhere; so we had a swell breakfast together and he urged me very much to remain for tapir and tiger shooting, as the sources, whence water was obtained for the works by means of acequias, was haunted by tapirs, and higher up the mountains by jaguars: but even Syrens would have been powerless to induce me to tarry.

In the midst of heavy rain, on we forced our way to the river banks, where we hesitated a long while at the fearful prospect before us. One vast foaming, rushing torrent, full of boulders and about a mile broad there disputed our path, and after our late experience at the Colorado, we were almost inclined to draw back from the impending struggle. Better counsels at length prevailed and rushing impetuously into the breakers, there to battle for life, contrary to our expectation, we gained the opposite shore in safety, when on we tramped again through soaking rain; but before reaching Campo Colorado, my peon's mule fell lame, so whilst the others went forward with the luggage, I had to

remain behind to keep him company in the dark and help him along as fast as possible. At last we entered Campo colorado and found our *avant-garde* had already taken possession of an empty rancho, into which the rain was beating through the wall-less sides, and whose roof afforded no more protection than a sieve. The worst part of it was we had not a particle of food with us, so we sent round to a few neighbouring dwellings to purchase some, but they had only a little green putrid meat which they were eating, and would part neither with that precious morsel nor any of their fowls, of which they owned a few: so with a plateful of scorched maize amongst us all we had to be satisfied and lay down to rest.

On this intensely wet journey, I had endeavoured to keep myself dry, by always having trowsers and socks ready, which I managed to change on horseback, as it was impossible to dismount into a foot of water to do so; but here, as my hammock was slung to the beams of the roof, one end of it became full of water, and I had to curl up in the other, but the least motion brought a stream into my compartment, besides the continual dripping from the roof, so that to remain dry under such circumstances was by no means easy. My experience of hammocks indeed, has been the reverse of satisfactory for many reasons, the chief of which is that the head being the heaviest part of the frame always descends during the night and on awaking, perhaps with a violent headache in consequence, the feet are found uppermost. It rained all night and con-

tinued the next day, a nasty persistent drenching downfall that nothing could withstand, but during the afternoon of the second day, as it became somewhat mitigated, off we started again, having had no food all that time.

The Rio Sora, the fourth of the ten plagues, whose banks we next visited, caused us much trouble with its shifting sands, and was one of the worst, where all were nearly equally bad, and it was only by extraordinary exertions we managed to get across it. Thence we made a stretch as far as San Lorenzo, chiefly remarkable to us as the first place where we were able to obtain food, after many days of semi-starvation, as well as imminent perils, and to it we did ample justice. The river of the same name was in the neighbourhood, with its broad foaming bed, three menacing channels and slippery crashing boulders, and on arrival at its borders, the first thing we heard was that a poor postman, who had endeavoured to cross it just before, had had all his ribs smashed in by the terrible braying boulders. By the skin of our teeth we were saved from such a fate, and then struggling on as far as Ledesma, we there remained a whole day to recruit the mules and ourselves, both worn pretty well to skeletons. Symptoms of chuchu too had again made their appearance and we were likewise anxious to gain information of the rivers yet to cross, as there was such continuous rain, and they rise and fall so fast. The Comisario of Ledesma, the local dignity, kindly invited me to his house whilst I remained, and as he saw me using a machine for loading cartridges,

was so struck with it, as to ask me to sell it him, in fact he allowed me no peace until I assented. I invited him to show me his gun, which was of 16 bore, whilst mine was of 12, and frankly tried to convince him, it would not serve; no matter, he was bent upon having it, and so, as I did not want to part with it, and more for fun than anything else, mentioned a price fully four times as great as it had cost me in Buenos Aires, when to my chagrin he at once paid the money: from this and many other similar occurrences, I am convinced that pretty European novelties would command a very extensive sale in the upper provinces and at exceedingly remunerative prices.

The next day we crossed the river Ledesma which, in its swollen condition, was quite a mile wide, with three treacherous concealed channels, each of which was like to be our grave.

And now, as we were on our way to the Rio Negro, and neared the Chañares, we passed through a district laden with splendid wild fruits, the chief of which were the Mistol (*Zysiphus mistol*) a tree yielding a fine edible fruit of the size of a bullet, and whose bark serves for a very detergent soap, and the Pata, a somewhat low arboreal form giving a magnificent fruit, the size of a plum with a hard kernel, and of the flavour of sweet almonds, with an after-taste of a beautiful acid, and whose bark, wood and roots contain a dye which with a mordant produces a fast coffee colour. At the Chañares, a group of about a dozen magnificent Chañar (*Gurliaca decorticans*) trees, lying close to the banks of

the Rio Francisco, we espied the dusky forms of several Mataco Indians who, on perceiving us immediately skulked away, and thereupon we felt secure of a feed, as the braves never frequent these natural orchards except when the fruit is ripe. Indeed on the way back, our surprise was great to notice scenes, that before were barren, now all dressed in vivid green, and trees with scarce a show of such, now loaded with delicious fruits.

These Indians visit the Chañares in the early morning, and gorge the fruit to bursting point, then crawl to the river and drink to the full, subsequently retiring to the forest to sleep all day under the trees, and the evening meal is but a repetition of the morning. The fruit of the Chañar is of an egg-shape and when ripe, about the same size, flavour and colour of a date, otherwise it is very astringent, as are all the fruits of the interior, and draws the muscles of the mouth so tight as to hinder speech; so with the Algarrobo fruit which is very sweet when mature, but unripe very acrid. All animals as well as man feed upon the fruits of the upper provinces.

The Rio Negro, although formidable, offered fewer difficulties than any of the rest: and then heading for the San Pedro, we both expected and found obstacles of the most insuperable kind, in the breadth and violence of the stream and its two deep rocky channels; several times were we carried away, and the poor cargo mules with heavy loads, scarce able to keep their nostrils above water, were all but lost amid the roaring foam, so that to find

ourselves safe on the other side was a matter of thankfulness indeed. Then pursuing our wet and weary way to Palos Santos, we took another route back from that followed in going, and found that on the former occasion we had wandered at least five leagues out of our way. We now branched off for Salta instead of Jujuy, along a route over the plain which lies outside the mountains, a road different from that pursued on the upward journey, and where the scenery was quite parklike, where meadows smiled through their mantle of green sward, and magnificent Algarrobos shed their graceful foliage to adorn the landscape and temper the rage of the Rio de las Pavas, which flows through their midst, the ninth cruel river, that entailed upon us the usual labour and peril. Advancing through country such as just described, which would have been admired under less adverse circumstances, if for instance our animals had been in better condition, instead of mere bags of bones that, during this afternoon, fell down five or six times from sheer exhaustion, or the rain less pelting, to say nothing of our own state; instead then of stopping to gaze, I hurried on alone to Santa Rosa, a large sugar factory where we spent the night, and where having made all necessary arrangements for fodder, food &c., I quietly and for several hours awaited the arrival of the peons and mules; all at last turned up except the youth, and his steed which had fallen down three leagues off and was unable to rise: however some time afterwards he appeared leading the poor brute by the bridle, and both looked deplorable.

The fact is, what with the bad fodder and excessive bloodletting from vampires and insects in Oran, and the terribly rough work of the succeeding journey, the animals had been reduced to a condition only more pitiable than that of their masters. All the way from Santa Rosa to Salta one could not be ridden, and we had to take it in turns to give his rider a lift, varied by alternate spells of walking, to relieve the willing mules; and in consequence, on crossing the river San Pedro, my assistant, a powerful swimmer, attempted to swim over it, but carried away, overwhelmed and crushed against a tree-trunk, was within an ace of being lost. As for the poor disabled brute which could scarcely put one foot before the other, and was incapable of swimming, we had to tie him to the tail of another and whilst driven from behind, actually drag him through the surf, from which he always emerged half strangled and drowned.

The next morning off we started again and arrived at Campo Santo, where lay the estate of the Cornejo family. Here it was that Henry Durnford, the ornithologist, and a friend of mine, was overtaken by death in 1878. Having but just recovered from a severe fever, which laid him low in Chuput, he imprudently ventured to set out alone on a long tour through the upper provinces, in which, exposure and hardship soon deprived the science he loved so well and humbly, of one of her most promising cultivators.

And now as there remained but one more river, the Mojotoro, to bar our advance, we were anxious

to view it and measure the obstructions it could offer; so hurrying on and descending to its banks, we there beheld a very broad, nasty, deep, rushing torrent full of eddying whirlpools which, in its present state, it would have been madness to attempt to cross, especially with our cargo. Several people indeed came down on horseback to try, but none dared to venture save one, who was obliged to swim his horse, and although unencumbered was very nearly swept away: so that we made marks on the rocks and sticks, and patiently awaited the ebb. But not thinking there would be any delay, and in mercy to the mules, we had omitted to bring food from the last station, nine miles off, the consequence was that there we had to remain for three days encamped in an adjoining forest, almost literally without sustenance, for although we sent off an express for some, the man returned without any save a small lump of bread, as the killing was over and after that no meat is to be had. At once I shouldered my gun and plashed out in the midst of a heavy rain, as many times before, to supply the camp with rations, but all I could get was a potful of Flycatchers and other small birds, which were so bitter we could not eat them. And now as we prepared to do battle with our last watery foe, the Mojotoro, it was determined not to risk the accident which was imminent at the river San Pedro, and so the boy was left on the bank until we had crossed and driven a mule back to him, which he then caught and rode over.

Arrived in safety on the other side of the

Mojotoro, as we had now survived all our toils, we were in a position to enjoy the beautiful scenery that presented itself, in which an enormously fine growth of timber was succeeded by broken undulating grass land merging into hills, on whose broad summits was splendid fine verdure dotted with copses, like an English park and to make the parallel more complete, a lovely lake a mile long lay in its bosom reflecting in its clear waters the forms of pasturing herds, at one end whereof rose a fine estancia-house. Then descending to welcome the telegraph wires, the harbingers of civilization, and emerging on to the beautiful broad Tucuman road, we branched off from that by a bridle path leading to the top of a hill, and looking down about three hundred feet from a cutting on its summit, beheld the object of our desires, the pretty city of Salta glistening beneath our feet.

As soon as possible after our arrival, I proceeded to inspect the cargo, which was knocked about frightfully and very much damaged by water. In a day's journey, a mule will fall, with the luggage on, perhaps ten or more times, either wanting a roll, a mule's luxury, or through exhaustion, in either case, crash goes the load on the ground, and then as they pass through forests or rough ground, bang goes the cargo every minute against trees or rocks. After arranging and repairing a little, the men were dismissed, the mules and gear sold, but Bucephalus, who had stood the journey well, found a purchaser in the American dentist before mentioned.

I now sought the governor, to whom I detailed the state in which I found Oran, and he promised at once to send soldiers to aid my friend Dr. Aguiere in the discharge of his duties, and also to give orders for the extension of telegraphic communication with that distant dependency.

In Salta many of the principal men came to consult me upon ores and ask my opinion of the different mines, several of which were offered to me on halves, if I would only get up a company to work them; but the glittering prospect held no place in my brain, which for a long time to come was wholly usurped by a nightmare of rushing waters.

I now determined to leave my assistant to proceed forward by himself to Tucuman with the luggage by mule cart, whilst I took the diligence thither, and it was so arranged that both were to start on the same day.

CHAPTER LIV.

RETURN JOURNEY FROM SALTA TO TUCUMAN.

CONTENTS:—Two clericals v. one cynic—Señor Goñi and his property—A modern but not model caravansary—Teams all red and gory—Humane society needed—A fawn persecuted with revolvers—Inhospitality—Pride of the natives in bed adornment—An army of vermin—Cotton and woollen factory—A near escape from lightning—Springs at Rosario de la frontera—Analyses of the waters—A public vehicle resembles a carpet bag—A maximum of filth, insolent service and extortion—Heavy bullock-carts—The Guarda-monte—Digging honey from the ground—A revolver attack upon Rheas—A view of Tucuman—A continuous descent from the north to the south of the Republic.

After the usual fuss we set out on the following morning about 7 a.m. by Diligence from Salta en route for Tucuman, a distance of about seventy leagues. There were five passengers including myself and a pair of students, one clerical from the ecclesiastical college in Salta, the other a lay scholar, so that theological polemics reigned all the way, heightened to a degree by the presence of an aged cynic, who delighted in flooring the fledglings at every opportunity: indeed had it not been for the amusement afforded by these endless discussions, the sufferings of the journey would have been well-nigh insupportable. So, drawn by ten mules, we rattled out of the town, passing round the base of a small eminence and then meandering between low

hills, but continually ascending, traversed for about a league the same road by which we arrived from Oran, afterwards descending along a stony highway for seven leagues, through undulating ground and woods although of somewhat low growth.

About midday we arrived at an insignificant village called Cobos, on the high road to Bolivia, a place of a few adobe houses with corridors to the street, in whose immediate vicinity courses a river of the same name, and here we unexpectedly met the manager and owner of this line of Mensagerias, Señor Goñi, who was evidently inspecting his property. On we went through woods of the same character, and over undulating ground, with mountains in the distance and hills covered with fine timber around, but our progress was slow, as the mules were in exceedingly poor condition, and no pasture to be had anywhere on the road, in fact the camps were completely bare of grass, so that it took five days instead of three to reach Tucuman.

Towards dusk of the first day, having covered only eleven leagues, we arrived at a posta called Palomitas, where a terribly wretched night awaited us. In this caravansary, whose owner prudently resides at a house in front, were no beds nor chairs, scarcely any food, and only two or three filthy spoons for a soup, closely akin to the black broth of the Spartans; and as for water, that was obtained from a large but nasty represa, on whose pitchy bosom I remarked wild duck floating, but into which they disdained to plunge. I had to sleep first on a bench in the open air and then on the ground

covered with vermin, and as an additional inconvenience a violent thunder and rain storm accompanied by high wind, wet me completely through. The premises were crowded too with several Chilian deserters who, after crossing Bolivia on foot, where they received horrible treatment, by begging their way had trudged all the weary distance down hither to seek this asylum for the night.

Next morning starting early, we passed through six leagues of woods and over wooded hills to reach the Rio Pasaje, a rapid river with deep banks, spanned by a fine wooden bridge 100 yards long, supported by columns of Roman cement and stone. Within the memory of man, two bridges have already been swept away, and at the foot of this their successor I noticed men fishing, a rare sight in this country, and some fine Dorados lying by their side, the trophies of their sport. On the farther bank occurred a few houses, a large number of carts detained by the dreadful state of the roads, and the Posta erected many years since by the National Government in a somewhat substantial manner with a zinc roof, where we breakfasted, but not on Posta fare, which we had long since learned to mistrust. After breakfast as, with a fresh team whose backs and chests were all red and gory, we coursed some distance along the banks of the Pasaje, amid a picturesque landscape, bolder hills and well-wooded, with a lower vegetation more exuberant, the roads became simply frightful, pitching the lumbering vehicle up and down in hollows and gullies wherein every moment we expected to find a grave, so that

very soon the miserable animals could scarcely move, and were fit to drop from exhaustion, bad treatment and want of food. Three and a half leagues from Pasaje we came to another Posta, where a relay of animals, in even a worse condition than the preceding, stood ready; and I cannot speak in terms too reprehensive of the barbarity of harnessing without compunction and inhumanly treating these poor half-starved mules which, scarce able to stand, with backs and chests one raw and bleeding mass, and staring bones, excited the utmost commiseration of all but their unmerciful masters. This line of Diligences indeed, as well in Postas and vehicles as in cattle, is excessively badly managed and a disgrace to the country, although the empresario receives a heavy monthly subsidy to serve the public well. I tremble for the team as we proceed on the next stage of two and a half leagues! but before half that distance was accomplished, the animals, in spite of the goads of their drivers, quite unable to do more, reduced their pace to a walk, and even then the passengers had continually to descend and walk, otherwise the Diligence would have come to a full stop at every eminence.

In passing through the woods here, one of the passengers espied a fawn through the window, and the coach was stopped to allow us to alight and have a shot at it with our revolvers; but although the forest reverberated with the echoes of our numerous discharges, the elegant little ruminant bounded away scathless. Trudging along on foot, we happened to stop at a rancho, where there was abun-

dance of goats with kids, in order to purchase some milk, but were surprised at the surly tone of the reply, that they would not sell any, but much more so on begging a glass of water, to be refused even that on a plea that there was none, when, after proceeding not more than a square further, we chanced upon a very pure, limpid stream, of which these people would not take the trouble to inform us. The inhospitality of the lower orders of this district, and, indeed, down through Tucuman generally, is well-known, and stands in remarkable contrast to the attention to strangers exhibited in all other parts of the Republic. One thing is noticeable, that at almost every mud rancho hereabouts, you see bedsteads and beds arranged outside beneath an open roof or corridor, the linen of the snowiest, and the pillows adorned with much fine lacework ; these, in winter, are always covered with handsomely-wrought ponchos as quilts, the whole the production of the dexterous feminine fingers within.

On nearing the Rio de las Piedras, it was found almost impossible to make the worn-out team stir one step further without frequent stoppages ; at last, in darkness, we crossed the river, which, fortunately, was not swollen—but at times is perilous to pass—and arrived at the Posta, having journeyed twelve leagues this day under very great difficulties. The comisario's house afforded us shelter for the night, but as there were not catres enough, I had to sleep on the table, where no long time elapsed 'ere I was joined by an army of 'binchucas' and other disgusting vermin. Las Piedras, although one of the

worst places in the Province of Salta for the chuchu, and with evidences of tolerably recent volcanic action in the immediate neighbourhood, yet on account of the peculiar fitness of the soil for the cultivation of cotton, and the permanent water supply afforded by the river, has given birth to a large establishment belonging to Sr. Don Prudencio Palacios, founded for the manufacture of cotton and woollen textures; the ponchos especially from which are well-known and valued throughout the country.

Embarking very early on the succeeding morn, we passed through forests of nothing but invaluable *cebil*, not of very large growth, but entirely devoid of underbrush, so that the stems, apparently planted at equal distances, had a very pretty effect. Cultivated ground followed, and then shortly Concha and subsequently San José were reached, small villages completely absorbed in agriculture, the former of which boasts of some houses of greater pretensions than ordinary, whilst the latter has a few good stores and a telegraph station. By pushing on we soon arrived at Metan, situated about half way between Salta and Tucuman, and through which the railway extension now in course of construction will pass. Here the scenery is decidedly bold and its parts agreeably grouped; undulating hills, rising up to the lofty mountains in the background, and covered with arboreal magnificence, grassy dells and innumerable streams which, although at present offering little or no opposition to our progress, as the rainy season advances, become foaming torrents.

In the afternoon it became suddenly dark towards the south, and almost immediately afterwards a storm of hail, rain and blinding lightning overtook our cortege, necessitating a stoppage for shelter; but as soon as it abated we started again and were rather disconcerted to observe, about a hundred yards farther on, three consecutive telegraph posts split neatly in halves their whole length down to the ground. About 5 p.m. we sighted the important village of Rosario de la Frontera, which has its plaza and many substantially built houses. This place is extremely well situated on a nice clear level plain considerably elevated above the surrounding country, and enjoys a fine view of undulating, well-wooded, and fertile landscape, backed up by lofty mountain ranges. The whole district is highly agricultural, and sugar, tobacco and cheese form the principal staples.

About five miles hence eastwards among the mountain crests, are four very remarkable springs, three of which are thermal and of different temperatures, whose united currents at last empty into the river Rosario, so that the quintessence of the virtues of all these spas may be secured, at any temperature preferred, by selecting a suitable spot for immersion. Extensive baths to receive the waters, an hotel, café, and hospital, besides several houses in the vicinity, have been erected to accommodate the crowds of visitors, especially from Salta and Tucuman, that congregate hither in winter to seek benefit from these healing streams; and for

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the satisfaction of the curious in such matters, an analysis of each is appended:—

No. 1—THERMAL SPRING.	
Temp. 163.4 ° F.	
100 cubic inches contain—	
	Grains Troy.
Bicarbonate of Magnesia	.1905
“ Iron	.1778
“ Soda	6.5010
Silicic Acid	1.3107
Silicate of Soda	.8485
Sulphate of Potash	1.4709
“ Soda	1.6223
“ Lime	.4928
Sulphuret of Sodium	.0406
Chloride “	4.8116
Organic substances	.4624
Total	17.9291
Free Carbonic Acid	.3658

No. 3—THERMAL SPRING.	
Temp. 145.8 ° F.	
100 cubic inches contain—	
	Grains Troy.
Chloride of Sodium	603.0520
Bicarbonate of Magnesia	3.2645
“ Iron	.8129
“ Lime	.2693
Sulphate of Potash	40.7361
“ Soda	5.3197
“ Lime	20.1712
Silicic Acid	1.7783
Organic substances	3.0415
Total	678.4855
No trace of free Carbonic Acid.	

No. 2—THERMAL SPRING.	
Temp. 144 ° F.	
100 cubic inches contain—	
	Grains Troy.
Sulphuret of Sodium	.6351
Chloride “	18.1922
Bicarbonate of Lime	.4420
“ Magnesia	.2612
“ Iron	.2236
“ Soda	4.7176
Silicic Acid	2.3016
Sulphate of Potash	1.2753
“ Soda	2.0908
“ Lime	.7774
Total	30.9198
Free Carbonic Acid	.2744

No. 4—COLD SPRING.	
100 cubic inches contain—	
	Grains Troy.
Bicarbonate of Magnesia	.4166
“ Iron	.5182
“ Soda	8.2082
Sulphate of Potash	.9577
“ Soda	2.8555
“ Lime	.6503
Sulphuret of Sodium	.0788
Chloride “	5.1696
Silicic Acid	1.9968
Silicate of Soda	.8256
Argillaceous earth	.0305
Organic substances	1.7072
Total	23.7150
Free Carbonic Acid	.3455

At Rosario de la Frontera, we took up two extra passengers, which crowded the vehicle and rendered the journey still more unendurable; for, as no licensing law exists in the republic to limit the number of such, every public conveyance is looked upon as a carpet bag, and uncomplaining travellers, especially of the male sex, get literally

and invariably sat upon, usually by well-developed females who never can be made to understand the true capacity of small spaces.

Having now secured a better team and the roads improving, we bowled along in a more respectable style, and arrived by nightfall at a supremely wretched Posta, the Arenales, distant four leagues from Rosario, by which time we had scored sixteen for the day. This Post-house will remain for ever photographed on my memory, as that place on the route, where filth, insolent service and extortion reached their maximum. It consisted of two miserable ranchos, in one of which the owner and his family lived, the other was a reeking den which could not even hold all the passengers and was provided with only four catres for seven people; so the trestlebeds were placed outside without shelter, but a violent storm arising, two of them were then thrust beneath a paltry little fuel shed to the great indignation of the surly host, whose strongly expressed objections remained however unheeded, on account of the pouring rain. On reaching a posta there always is an undignified scramble for the beds, which I ever avoided, as it has become a matter of perfect indifference to me, where I pass the night; in fact, on this occasion, creeping beneath the catre of one of my companions, I slept beautifully upon the bare ground, enjoying complete immunity both from the attacks of binchucas and the inclemency of the weather. By dint of great persuasion we managed to secure a basin of broth each for dinner, but had to pay the astounding price of fourteen

shillings for it, as there is no fixed tariff of charges. Two or three circumstances here attracted attention: the bullock carts have excessively heavy wheels, like those of a traction engine, quite a foot broad, and roughly hewn from the logs, whilst above, the structure is almost gossamer-like, consisting of reeds of very slight diameter bound together; here also the horsemen invariably wear the guarda-monte, a high and broad flap of hide in front of their knees on each side of the saddle, to protect their legs from the thorny woods so characteristic of the neighbourhood; and lastly, I was much interested in watching the cartmen, as in their lazy progress they stopped and dug out, from the depth of four or five feet on the roadside, amazing quantities of honey from the nests of ground wasps which, for security, had burrowed them deep enough, as they innocently thought, to escape the inquisitiveness of man.

Next morning before sunrise we were again under weigh and shortly emerged on to an open plain of large extent covered with high and coarse grass, called Campo de los Mogotes, on which were grazing numerous herds of large-boned cattle, with here and there an estancia house peeping as a sentinel from their midst; the view was fine from the side by which we entered, as the slightly swelling flat expanse was clothed with a rich olive-green garb, as far as the picturesque hills starting up about a league away in front, behind which stood grouped a lofty mountainous chain rendered blue by the distance. Close by on our right arose ver-

dant hills, but on the left the eye rested not, until after spanning many intermediate level leagues of herbage, it reposed on the hazy summits of a chain of sierras.

Although the country through which we had already passed was by no means depopulated, we now reached a district much more thickly inhabited, and after some six leagues arrived at the banks of the Rio Tala, which forms the boundary line between Salta and Tucuman, and at a Posta on the other side of it, halted for breakfast. Of all the hostelries along the route, this was by far the most civilized, as a good house with corridor, rooms moderately furnished, plain food and reasonable charges, awaited us, and besides these advantages, an adjoining store provided any extra comforts desired. After breakfast our road lay through scenery of a somewhat different aspect, although in parts, the land became swelling and bosquetish, and occasionally interspersed with lovely hills and mountains; beds of streams now almost entirely deprived of water crossed the highway at intervals, and here it was that on passing through a wood, I espied four or five Rheas, so the Diligence was stopped to allow a revolver attack, which the knowing Suris quietly permitted, taking care only to maintain the original distance of fifty yards between themselves and their would-be capturers. Sixteen leagues were this day covered, and when about half way, we passed through the labouring village of Trancas, which although containing perhaps but 500 very poor inhabitants, has a good church and is a tele-

graph station, arriving about dark at Tapia, a remarkably pretty hamlet embedded amongst rivulets, dells, trees, hills and mountains, that render the spot charming. And now, as only six leagues intervened between us and our goal, the next morning bidding an early farewell to the lovely Tapia, we started with a good team wherewith to make a respectable entrance into the capital; and as we rolled on over an undulating tract, astonishment seized us on beholding one or two gangs of men busy road-mending, so unusual a sight in this country, where once traced, highways are generally left to take care of themselves.

Reaching and passing over a series of bluff hills covered with dense arboreal growth, we descended into a plain in the midst of which, removed but little from the Sierras, stands the city of Tucuman, the towers of whose churches are visible for a considerable distance. Through plantations and orchards, about which are dotted a few ranchos but no houses of any pretensions, we wend our now pleasant way and land in the streets of that provincial metropolis, having maintained one continued unbroken descent the whole journey from Salta, 3468 feet above sea level, to Tucuman, 1350, where, on account of the wretched state of the roads, I had the prospect of a fortnight's sojourn, in order to await the arrival of my assistant, an expectation almost realized by the event, as the tardy mule-carts delayed their start from Salta for some days after the appointed time.

CHAPTER LV.

UP THE URUGUAY AND DOWN THE PARANÁ.

CONTENTS:—Saturno v. Kosmos—Martin Garcia—No worse for grounding—Landing at Concordia—Admiration of arms—Mr. Cayley's Ox tongues—Argus-eyed taxation—Competition with the U. S. in the English market—The travelling boudoir—Rheas and Deer feeding upon palm fruit—Mr. Budge's castor-oil plantation—Ant-hills—A blast from a saladero—Eulogium due to the E. A. railway—Monte Caseros—The Mensajero—Brazilian policy on the Upper Uruguay—Pursuit of seals—The border Stone-tower—A steamer whistling to warn cattle—Seals and Carpinchos—What the turbid or clear waters of the Uruguay indicate—No travelling after dark—Uruguayana—The Estella—Never look a gift-horse in the mouth—Paso de los Libres and its murderous fight—A dinner squeeze and happy release—A curious position for a ton stone—Bonpland R. I. P.—Price of wood on the shores—Brazilian monitors and gunboats—Itaqui and its arsenal—A steamer poised like a bird—Rapids, floating trunks and stockades—Santo Tomé—Enormous Jesuit ruins—The best Hotel—The gospel of the modern disciples of Saint Thomas—Particulars of the Uruguay—Sudden apparition of a gunboat—Canalization, railway or dynamite—Voy á Misiones—The three first sugar plantations in Misiones—Climate of Misiones—Contraband trade—Languages spoken.

On the occasion of my first trip up the Uruguay, I was taken to my destination on the wings of a lively planet the Saturno, and now for a change I boarded the Universe or Kosmos in the inner roads of Buenos Aires, at a little after 10 a.m. on the 1st of May, fortunate in having three lively companions, two Englishmen proceeding to the

Alto Uruguay intent on sugar, and a native National Bank inspector, whose orbit was a little more restricted. An examination of this beautiful steamer gave us every satisfaction and confidence; besides being very large and powerful, handsomely decorated and beautifully fitted up with all the latest improvements, electric bells in every cabin, electric globes in the saloon, and hydraulic steering apparatus, she was well officered and manned, and to English engineers was committed the management of the machinery: whilst it was a further source of gratification to learn that we should not have to quit the Universe, a sad fate for mortals, but that she was bound the whole way up to Concordia.

The breakfast bell rang just as we had cleared the outer roads, and a fact that exactly coincided with my disposition in the matter, was early apparent, namely, that the breakfasts on board were much more substantial and every way better than the dinners. Martin Garcia bristling with guns was soon passed and the River Uruguay entered; and whilst seated at the evening meal of the first day, a sudden and most peculiar motion was experienced, swaying first in one direction and then the other, the ship in fact had grounded, the Universe come to rest, but in a few minutes off we were again, none the worse for the contact with the soft river bed: indeed during the night the same thing happened two or three times without much inconvenience, but as there was a breeze blowing, and the vessel was rolling considerably, such accidents might

have been attended with danger. Several places were touched at whilst we slept, the chief of which Concepcion del Uruguay robbed us of half our sixty first class passengers. The succeeding morning broke fine but fresh and we enjoyed a very early stroll on deck viewing the interesting scenery, watching the Saladeros and admiring the palm-groves on the Entre-Riano shore.

At about 2 p.m. of the same day, we arrived at Concordia, but as the screw-pile mole is not yet completed there, the rogue of a boatman wanted to charge ten shillings each for landing us from the steamer, a row of not more than a hundred yards. Putting our luggage into a cart and proceeding up the barranca to the Custom House, the officials who, a year and a half ago, had taken me for a dentist, let me pass without inspection upon my telling them I was bound on a scientific expedition into Misiones, and only made one request, to have a look at my rifle, as good arms are universally appreciated in this country. Often indeed have I been pestered, on my various expeditions, to sell various weapons to which the bystanders had taken a fancy. On this occasion a handy Remington carbine put the excise officers into ecstasies and some time after parting from them, exclamations of delight were heard issuing from their childish lips. Instead of taking the tramway a coach was called to drive us to the Hotel de Paris, situated in the principal street and a square away from the Plaza, where although the general arrangements were beneath notice, the food was tolerable for a provincial

commissariat. As soon as possible I went down to the station of the East Argentine Railway and called upon Mr. Smart the efficient manager and other friends there; and then inspected an English industry which Mr. Caley has lately established for the tinning of fresh ox tongues. It interested me exceedingly to go through the premises in which about twenty or more hands are employed, and observe the various processes of cutting out the tins by machinery and soldering them, of cleaning, preparing and steaming the tongues and finally hermetically sealing the delicious morsels. In the two years he has been working, Mr. Caley has, at great expense, turned out some 120,000 tins, each containing one tongue of exquisite flavour, and at the period of my visit a thousand tongues per day was the average. Such an industry however is of course only an accessory of the *saladeros* and cannot operate except when they are in action, which is but seven months of the year, and three such are put under requisition to furnish the necessary supplies for this establishment, those of Concordia, Salto and Mocorotá.

Argentine provincial governments however possess the eyes of Argus for any new industries, which they regard simply as so many geese impregnated with golden ova; as for any patriotic attempt to foster such in order to benefit the country, such an idea forms no part of the gubernative policy in vogue south of the tropic of Capricorn; nay rather to lie close as a parasitic sponge to any nascent factorial sprouts and suck from their vitals the very

life blood, to sit upon and ultimately crush them by overloading, these are the canons of a selfish and short-sighted administration universal throughout the republic, and one great reason why with a plethora of products there are so few industries.*

Thus immediately Mr. Caley commenced to work his factory, taxes rained upon him, import duties were put upon tin, pine and other articles required in the various processes, and then to burn the candle at both ends came an export duty upon the very tongues themselves, so that imposts combined with heavy wages now render it extremely difficult for him to compete with the United States in the English market. With regard to tinned beef however, the case wears an altogether different aspect, rather from inherent and at present permanent, than casual fiscal difficulties; and any attempt to displace or even rival the United States in European emporia, must end in discomfiture for a period more or less lengthened. In this country, animals are killed too young and so the flesh contains a large contingent of water which, after the cooking process, flows out and remains in the tin, leaving the meat stringy and without flavour. In an agricultural territory like the States, it is the custom to fatten up the cattle on maize and other aliments previous to the killing season, a practice here impossible on account of the cost, as agriculture is still in its infancy; and lastly a long sea voyage involving

* A fact rendered patent by the stalls of the Continental Exhibition now open in Buenos Aires.

excessive equatorial heat becomes another adverse factor to successful competition with the Stars and Stripes.

We remained at Concordia until the Wednesday morning, when at 7 a.m. the train bore us from the fine East Argentine station to continue the journey on to Misiones. The manager kindly gave me a free pass by the river steamer which meets the train at Monte Caseros to carry passengers and cargo upwards to the Brazilian port of Uruguayana, where another and smaller vessel enabled us to resume our progress northwards; but a like indulgence by the railway was not conceded. The first-class carriage to which we were introduced, was very comfortably fitted up, being of English make, with the two central compartments thrown into one, so as to form an elegant square room, in the middle of which were two fixed card tables and a couple of movable chairs, besides a broad luxuriously cushioned seat running all round what might be termed the travelling boudoir. The Indian sun shades too I found a great improvement upon the ordinary blinds, as whilst keeping off the sun, they neither obstruct the view nor the passage of air.

After traversing undulating grass lands for a time, we got a glimpse of the noble Uruguay, with Salto on the farther bank, clustering its sheeny habitations thickly up the green hillside; and then our asthmatic courser tore its way through groves of scattered, aristocratic palms, which crest the swelling land and exclude all other vegetation from their vicinity, but entice the pretty deer and rheas,

many of which we saw, to feed upon their fallen fruit. Then as sparse copses of low thorny trees, succeeded by woods of thick and lofty ceibos flashed by the windows, we soon crossed the stream of Gualaguayeito which, fringed with verdure, introduced the train to the station of the same name, where the identical station master, with whom I lodged nearly two years since, greeted me, and from him I learnt that butterflies, which erstwhile were numerous, had now abandoned the region owing to a plague of locusts.

The same undulating landscape characterizes the whole of the country between Gualaguayeito and Federacion, but palms have retired, leaving in their stead no other arboreal substitute; and on nearing the latter place, which is a thriving little port on the Uruguay, we obtained a splendid view of a large stretch of river scenery. Leaving Federacion, there soon came in sight, on our left, a chacra of forty squares belonging to Mr. Budge, the locomotive superintendent of the East Argentine Railway, whereon that gentleman grows large crops of the castor oil plant, from whose prickly capsules, the oil is extracted by means of a press in Federacion: and then having passed an extensive lake at least a league long, the line hugs the shores of the Uruguay, disclosing to our view a magnificent fluvial picture. On we sped over the river Mondurubí by a fine bridge of four spans, its banks as usual lined with herbage, its waters of the purest; when the thriving colony of Villa Libertad loomed, a smiling cultivated spot which, a few short years

ago was desert camp, but now counts some five hundred families. At the station of Chajarí which speedily followed, we found immense piles of ñandubuy fencing posts awaiting transport; and proceeding onwards and crossing the river Mocoretá which forms the provincial frontier between Entre Ríos and Corrientes, were struck with the appearance of a tract, on our left, of several acres covered thickly over with ant hills, each two to three feet high, and by and by delighted with a laguna on whose bosom floated majestically some rare duck. The whole of this district seems well watered, nevertheless complaints are frequently heard of the occurrence of drought, as well as of the visits of locusts. The train was at length pulled up at a large saladero belonging to Pla Lañol y Ca., a very busy slaughterhouse, where armies of hides stretched out to dry without, tell of hecatombic carnage within, and a blast of the smoke from which revealed some of the most nauseating odours that ever crossed my olfactories. At 10.40 a.m. we breakfasted at the station of Mocoretá, at a cost of 3.6 a head, and as only 24 minutes were allowed for four courses and sweets washed down with French or Spanish wines, a Swindon haste was observable and it was a difficult task to extract our dollar's worth from the table, from which we rose only to pursue our journey over a well-wooded country until our arrival at Naranjitos, around which station were again piled enormous stacks of ñandubuy posts. Again the whistle sounded, and the snort of our impatient iron steed announced the commencement of the last stage

of our railway journey, on which we crossed numerous streams to land at 12.20 at Monte Caseros, the terminus of the railway, and 96 miles from Concordia, where the station, with its attendant hotel, struck me as a credit to the company, a eulogium which may be truthfully extended to the whole series of them. As the line is ballasted throughout with gravel and in consequence dust is eliminated from the East Argentine Railway as a troublesome factor, the trip had been felt by no means tedious; much cattle had been observed along the route, as well as perhaps five species of birds strangers as yet to my collection.

Monte Caseros is a straggling town of about 2000 inhabitants, situated on open undulating grass lands and, unlike most other Argentine towns, laid out with very fine broad streets, but I failed to notice anything of further interest about the place. From the station, a branch line of about a league in length has been laid to a small port on the Ceibo, an affluent of the Uruguay, which affords a secure and advantageous anchorage, not far from the main stream, to the company's steamer the *Mensajero* which plies on the Upper Uruguay. On our passage along this iron offshoot, fine views were obtained of Monte Caseros, and its twin brother Santa Rosa on the opposite Uruguayan bank, as well as glimpses of the Brazilian shore; and on arrival at Ceibo, the Messenger was observed busy loading with the aid of a steam crane. We embarked immediately, but found the steamer could not sail until next day on account of the excess of cargo offering,

and so we made ourselves comfortable on board, instead of toddling back to Monte Caseros.

The Mensajero is a small iron steamer of 80 tons burden and upwards, a like horse power, and with a speed of eleven knots; of very light draught and flat bottomed, with a broad beam, rounded at the ends and nearly of the same breadth throughout; she is fitted up in a superior style for the accommodation of passengers and has a fine roofed hurricane deck of great capacity, which forms a splendid promenade. This vessel was built in England and put together in Monte Caseros and has been running under the Argentine flag for about a year and a half, between Monte Caseros and the upper ports of the Uruguay, under the command of Captain Carrol, who keeps every thing in apple-pie order: but as the Brazilians dominate the Alto-Uruguay, and desire to force all the ships frequenting it to fly their flag, heavy dues* have in consequence been laid upon all foreign, including Argentine, shipping visiting their harbours, and this in direct contravention of an express stipulation contained in a triangular treaty between Brazil, the Argentine Republic and the Banda Oriental, executed in 1824, and which distinctly enjoins that all three nations shall partake of the same privileges and immunities and be subject to the same imposts throughout the river Uruguay: and so the three other steamers which ply on the same route and have adopted the Brazi-

* Every time the Mensajero enters Uruguayana (a Brazilian port), she has to pay twenty patacons (£4) to maintain a light that does not exist.

lian flag, thereby render the competition of the Messenger very onerous.

The succeeding morning after a bright moonlight night in which sleep was almost impossible by reason of the continual leaping and splashing of large fish from and upon the bosom of the placid river, I rose early, expecting the vessel to weigh anchor betimes, but unfortunately the steam crane broke down and delayed our start, and whilst looking about on deck, my servant came running up to say that there were some lobos (seals) not far off, and sure enough two were seen gamboling at the mouth of the stream, where it joins the main river, at a distance of not more than 300 yards from the moorings, a certain indication of bad weather. As the guns were packed up, I went on shore with my revolver and concealed by brushwood approached within forty yards of the spot and fired, but although the ball struck within a foot of the head of the one aimed at, the pair at once dived and turned up a long way towards the opposite shore. What here interested me likewise was to watch the excitement of the immense swarms of large wasps (*Polistes morio*) that invaded both station and steamer, on the look out for a suitable spot to found their vespiaries; these burly filibusters had been driven from the woods by domestic bees which, escaped from man, had resumed their free arboreal life: nor less to notice other insect strangers that, evidently frightened by the hoarse prognostications of the weather-wise seals, had taken refuge too on

board, and were to be seen crawling up the mast; the most conspicuous of which was the lovely beetle *Mesomphalia auromarginata* (?).

At 2 p.m. having shipped all the cargo and taken on board two more passengers, the cable was cast off and a few minutes sufficed to bear our craft on to the smooth and beautiful bosom of the Uruguay, which here averages about half a mile in breadth, with banks not undulating like those of Concordia but low and flat, and fringed with lovely islands inhabited alone by wood-cutters. Further up on the left bank, stands the boundary island, whereon, in times past, when it formed a part of the mainland, was erected a stone tower to mark the limits between Brazil and the Banda Oriental; the stone tower remains, but the wayward stream, forcing a channel between them, has divorced the beacon from the continent.

Although our little steamer was heavily laden, she drew only three feet, but as the river was tolerably high, under the guidance of the Alto Uruguay Rastreador we felt no anxiety on passing over the rapids of San Pedro, situated about a third of the distance between Ceibo and Uruguayana, although the water eddied very much, a warning index of the rocky and dangerous nature of its bottom, and sometimes when the water is low, the Mensajero has to pass over shallows, so common in this river, with scarce an inch beneath her keel, in the midst of which cattle stand drinking, and then the whistle has to be blown, as on a railway, to make them get out of the way. As we proceeded the river banks

became lined with trees and shrubs, but not to any distance inland, only in general a narrow belt of sparse but in some places dense verdure was visible, deprived entirely of timber of any size: and here another seal popped its black muzzle from the waters in our wake, whilst the Brazilian shore was alive with carpinchos. Wherever rising grass lands occurred on either bank, there arose scattered habitations, with now and again a herd of cattle, but the country is very thinly populated, even close to the river side. The waters of the Uruguay in its upper part did not look inviting but very turbid, and such is always the case when it floods, unless the rise is due to causes in operation near its sources, when in that case this portion of its course is invariably clear as well as all below; at present it was evident that the increase of its volume was the result of a swelling of the neighbouring affluents and arroyos; but in the dry season never was there a river whose stream presented a clearer, deeper, brighter mirror.

About 10.30 p.m. we anchored for the night, as it is not usual here to prosecute a journey by water after dark, and tempted by the fineness of the weather, I arranged my bed on deck, not from any want of accommodation below, for although the Messenger is not fitted with cabins, movable bunks are put together in a few minutes in the saloon to any extent required.

On the following morning the paddles were set in motion by six a.m. and very shortly the Church towers at Uruguayana revealed themselves,

although still distant upwards of an hour's journey: and here the Argentine shore undergoes marked physical changes, undulating grass lands crowned with palm groves now usurp, but no trees nor vegetation whatever are visible close to the river; yet the Brazilian coast although more elevated than hitherto, exhibits no palms, but is densely covered as to its banks with low trees and shrubs. Passing an island on the left bank, we entered a magnificent reach of the river, fully a mile broad, and in a few minutes the engines came to rest in front of Uruguayana, distant twenty leagues from Monte Caseros, and we were boarded by the Brazilian flag. Another small steamer lay at anchor by our side, and a few lighters were dotted around.

The town, of about 4000 inhabitants, is straggling and covers a low hill which rises gently up from the water's edge. The houses, which strike one as different from those on the Argentine shore, are nearly all of ground floor, with sloping tiled roofs, and exceedingly confined square windows, glazed with very small panes, but entirely without rejas (bars), whilst in most, the doors open directly into the best room and not into a passage as is usual on the other side of the river. As the residences differ, so do the customs; in all these Brazilian towns, the absence of hospitality is a marked feature, and scarcely a woman of any sort is to be seen, as they all remain secluded and never appear even at the windows.

Vegetables seem abundant enough here, judging from the boat loads lying alongside for sale, but

they consist principally of mandioca, zapallos about 2*d.* apiece, and maní (earth nuts) which are eaten raw, and these serve as the principal food for the lower orders: communication is maintained between the two shores by a steam launch which plies constantly to and fro between Uruguayana and Paso de los Libres an Argentine town almost directly opposite the former and distant therefrom about a league.

As the Mensajero had now exhausted her tether, we had to tranship into the Estella, a still smaller steamer, proceeding farther up the Uruguay, which arrived at 2 p.m. on the same day. We were soon on board with all our traps, but surprise and disgust took possession of us on witnessing the prodigious inferiority of this tiny craft of 20 ton capacity which, driven by an engine of similar horse power, only draws 32 inches, but nevertheless makes enormous profits, as hitherto there has been no competition to withstand.

After the clean, bright and comfortable Mensajero with its beautiful promenade deck and fine roomy saloon, to be cooped in this dirty little cargo boat, crowded with twenty-eight first class passengers, the saloon in the meanwhile scarcely able to contain half that number; the only two cabins stuffed with half a dozen women; the nauseating odour of half-boiled grease from the engines which, with the boiler, were built on deck; jostled by wood fuel, merchandise and humanity, with scarce room to stand or turn and none to sit; the little deck there was, apart from a small hurricane one overhead, a few square yards only in size, swimming in

water which leaked into it from above; a steam saw, causing a most excruciating din, and at work by night and day cutting up the wood into suitable lengths for the furnace; these were features disheartening enough: but when those weather prophets the seals were found to be right, and in the afternoon it commenced to rain and continued without intermission all night, depriving us of even the insignificant stroll upon the unroofed hurricane deck; and the saloon aft with its narrow hard benches was now chock full of people, so that there was actually no shelter on board; our miseries culminated, and if it had not been for the great kindness of my fellow-countryman Mr. Birdsall the engineer on board, who gave us up his cabin, a little hole six feet by four and a half, and so small that when three of us were inside, the door could not be opened, we should have fared badly indeed. The Captain, Señor Iglesias, who was much superior in character to the vessel under his command, and very attentive to passengers, when he knew my errand, at once placed two passages at my disposal, a piece of generosity I was quite unprepared to anticipate, and which brands my previous remarks as adverse in spirit to the prohibitory aphorism, "Never look a gift-horse in the mouth."

Late in the afternoon the anchor was weighed and the *Estella* started for Paso de los Libres, on the other side of the river, a small but picturesque town situated on the top of a hill amongst intense verdure. The port lies at the entrance of an arroyo, about a hundred yards wide, which has become his-

torie as the scene of a most murderous and determined fight in the year 1866, between the Brazilians and Argentines on one side and the Paraguayans on the other, when the latter were cut to pieces in such numbers as to dye the arroyo crimson. A few small craft here lay at anchor with the steam ferry, and after occupying two hours in loading wood and discharging cargo, we returned in the dark to Uruguayana in order to take up more passengers. At six p.m. we sat down to dinner and a rare squeeze it was, but that was not the worst of it, as food failed and the dinner service was insufficient, so that one glass, knife and fork, had to serve for two or three people, and as several Brazilians, not of the best class, were of the party, and their habits are by no means congenial with an Englishman's, neither was the food rendered appetizing, nor the company inviting. The second course had just been served, when the Estella again took up her anchorage in the port of Uruguayana, close alongside our old acquaintance the Mensajero, and almost immediately we heard the jovial voice of our merry friend Mr. Budge hailing us from her deck; a boat was instantly lowered, he appeared on board and insisted upon taking us all off to dinner on the Messenger, a very great relief indeed. We passed the night on board, as it was tempestuous, but early next morning sought our ark and started at nine, passing Paso de los Libres and steaming up against the current amid islands covered with wood. At times the downward flow of the stream was so strong that we brushed the very Argentine shore to escape it, and

here and there peeping through the rifts made by the woodcutters, caught glimpses of rafts loaded with heavy timber ready to be launched on their downward course. About 4 p.m. we arrived off the Argentine town of San Martín, where that illustrious general was born, and here we unloaded cargo. In this place are many interesting stone ruins of the times of the Jesuits, and one peculiar tree, which contains fast embedded in a fork of it five feet from the ground, a stone weighing quite a ton, and which must have been raised by the growth of the trunk and branches. Crossing over to an island lying in front of the town to take in wood, an operation repeated at least five times on the passage from Monte Caseros to Santo Tomé, we there drop an imaginary tear to the memory of the scientific botanist Bonpland, who laboured here for many years and retired to Paso de los Libres to die. Wherever the wood is thickest, there lumbermen settle, erect a shanty, and begin to fell and stack it, ready for the use of passing steamers, to which they retail it at the rate of 2.6 the hundred pieces. Early next morning we reached the Argentine hamlet of Alvear, an insignificant port consisting of only a few huts and a solitary boat or two on the water, but directly in front, on the opposite shore, lies the important Brazilian town of Itaquí, where there is an arsenal. The river here is narrow, but has a depth of 23 feet at the lowest state of the tide, and in consequence the Brazilians have established extensive works and maintain on its waters a strong naval force, consisting of two monitors and three gunboats, which com-

pletely dominates the Alto Uruguay. Whilst the Estella lay at anchor waiting for wood, we took a boat and visited Itaquí, which is in all respects similar to Uruguayana, though neither so large nor so lively. A fine view of the river may be obtained from any part of the town, as it is built on a slope descending to the water's edge.

Being Sunday, the arsenal was not at work, and as the road leading thither was completely impassable with mud, we had no opportunity of inspecting it, much to our disappointment, so turning into an hotel instead, we breakfasted and returned on board. A few leagues above Itaquí, the Estella crossed one of the worst shallows or rapids in the whole river, the Butuí, which are quite impassable at low water, and where the current is so extremely strong that the steamer with difficulty made any headway against it; nay, in the very worst part, the vessel, with full steam on, actually hung poised like a bird and shivering, for a period of at least two minutes, and then slowly forged ahead. It may be imagined with what eager interest the passengers watched the struggle of the opposing forces, on which the safety of the tiny craft and very probably their lives depended; for should the current succeed in once turning the steamer's head ever so little, she would spin like a top and be dashed to pieces against the rocks that cover the bed of the river. Nor is this the only danger that threatens the navigation, but floating trunks in numbers speed on their destructive course and meet but to wreck, whilst others stockaded in

the mud rear their menacing points to pierce opposing bottoms, and these latter are the more dangerous especially when high water renders them invisible. As the river was now running very rapidly downwards, due to the continued rain, in order to avoid the swelling tide and endangering obstacles, we hugged closely the Argentine coast, which was strewn thickly with vegetation of a tropical aspect, and just as we were sitting down to dinner, the engines, breaking some bolt or other, gave a few sudden spurts and then came to rest, but about 10 p.m. we managed to start afresh amid thick darkness and pelting rain, to continue the voyage all night. The next morning, to our delight, broke bright and clear, and at 8 a.m. we arrived at that point of the Brazilian shore, where passengers disembark for San Borja, a town distant a league or so from the water. Again the engines move and pressing on past dense arboreal and shrub-like vegetation, we soon sighted the green-clad hills of Santo Tomé, which rise invitingly direct from the river bank, a signal for the instant arrangement of baggage for landing, in the midst of which employment we were surprised by the rattling of the anchor chain, and looking out found land close under the bow, and planks already thrust out whereby to reach terra firma. Leaving my impedimenta on board, I, in company with the comisario of the steamer, started for the town, to search for and hire an empty room, and proceeded up a rather steep incline of sand and gravel, well-wooded with trees of low growth and brushwood, from the midst of

which, on either side, peeped at intervals a few miserable ranchos, but as we advanced, these improved in appearance and surroundings, and nestling among orange groves in full fruit, bananas and palms, began to look quite enticing. On surmounting the hill and casting a glance behind, both the river which here takes a wide sweep eastward and the opposite coast, were brought out into strong relief, all the land far and near presenting a wavy surface covered with foliage.

The town commences about three quarters of a mile from the water, and is built in the usual straggling style, with many adobe houses, but only perhaps half a dozen endowed with any approach to comfort. We crossed the empty, waste and by no means imposing plaza, around which are gathered a few wretched dwellings, and into which, some strolling acrobats were endeavouring to infuse a little life by erecting a tent wherein to perform, as the Grand National festival of the 25th of May was approaching. The only point of interest however centres here in the chapel built in 1871 entirely of the stone found amongst the Jesuit ruins close by. The greater part of this stone consists of a hard honey-combed conglomerate, resembling artificial concrete, although undoubtedly there is much old red sandstone besides, yet no quarries exist anywhere in the neighbourhood. It is found in heavy oblong blocks, and sold by the municipality, principally for the construction of walls. Seven years ago, walls of ninety feet in height and of enormous thickness remained, but now they are all pulled

down, in fact the whole of the stone has been cleared away. By the side of the church hangs a large bell, with the inscription,

Ora pro nobis. 1688.

Sancte Gabriel ✠

which was unearthed from the debris, but is unfortunately cracked. In the extensive ruins at the back of the present church, are still to be seen, the entrance to a subterranean passage, which has never yet been opened up, an old well built in stone, whose upper edges are now covered over with a fringe of beautiful ferns, fragments of finely carved sandstone, and a huge font of the same material wrought into the shape of a peeten, coins, medals and ornaments, in addition to piles of other relics.

Leaving the public square, we now entered the principal street, which is completely unpaved, so that in wet weather it becomes a lagoon and locomotion is rendered impossible; but thanks to the porous sandy soil, this soon dries up and leaves no sticky clay as in Buenos Aires. The whole aspect of the town, especially from this point, reminded me strongly of Oran. Down the High Street we wended for about a quarter of a mile, until passing the police office, we espied the only hostelry in the place, a miserable little inn with a thatched roof, in which a billiard table and bar formed the chief features, both of which are much resorted to not alone by the chusma or gaucho tribe, but by all classes, as gambling at cards and billiards interspersed with frequent totting seemingly constitute the chief occupations of the inhabitants of Santo Tomé.

The Hotel service was of the poorest, and yet seven shillings per diem was the charge. As for furniture it was in vain to look for more than the very barest necessity, and equally so to expect tolerable cooking: the menu of four courses would disgrace the lowest fonda in the metropolis, the principal dish being very tough meat fried in cotton oil, served up without any vegetables, all the more strange as anything will here grow to perfection: but the fact is the people prefer to live a gambling life, in abject poverty, to working. Hospitality, laziness and extortion form the triune gospel of the modern disciples of Saint Thomas, and yet they seem united and work together for the public good, which is more than can be said of the inhabitants of Oran.

The dining room, an elegant apartment with a very permeable roof which, when it rained, as it did more or less the whole time I was there, admitted copious discharges of water from all points, so that rills rejoiced to run races together over the brick floor, to escape which, the waiter, who generally attended in top boots, for economy sake would doff them on these occasions, and appeared with naked feet and legs, whilst the guests with their nether limbs poised on the table edge and chairs conveniently arranged between neighbouring affluents, ate their bread in peace, if not with satisfaction.

During my trip up to and fortnight's stay in Santo Tomé, and subsequent experience nearer its sources, I had some opportunity of studying the

river Uruguay, and prominent amongst the drawbacks to its navigation may be mentioned its tortuousness, current and sudden floods. As an example of its contrary flexure it will be sufficient to state that some leagues above that town and near Garruchos, where some Englishmen hold a concession for sugar planting, occurs an exceedingly deep and awkward bend, the Vuelta Mercedes, so that in ascending the river, the boat's bows point due South. As to the current; at extremely low water, when the average depth does not exceed twenty inches, the stream flows downwards about two miles an hour; at high water, a speed of three miles is attained; but in extreme floods, when the average depth is twenty feet, the current runs at quite six miles, but of course in the rapids and constricted passes these rates are always considerably exceeded. With regard to freshets, I was particularly struck with one that occurred during my sojourn in Santo Tomé; the river rose upwards of thirty six feet in twelve days, so as to cover the ranchos on its banks, some twenty of which were under water, several with the tops alone of their roofs projecting, others completely lost to view; in other parts it has been known to rise eighty-five inches in a single night, and even more rapidly still in the upper part of its course where it is narrower. On this occasion I found it extremely interesting to take a boat and go coasting along amongst the peeping tops of submerged woods, where numbers of iguanas, snakes and other animals were perched and imprisoned by the swelling tide. This rise is

periodical and due to the rains that set in at this season, the very reverse of which happens to the sister waters of the Paraná, whose flood, depending upon the melting of the snows, takes place at the very opposite time of year. Indeed without this recurring overflow, the Uruguay would be almost valueless as a navigable river, at any rate, in its upper parts, but during its continuance, vessels of large draught are able to get up and down on their peaceful or warlike mission; thus one morning we were surprised by a visit from one of the Brazilian gunboats from below; yet on the other hand, in these floods, nocturnal if not diurnal navigation is rendered almost impracticable by reason of the danger of a collision with tree trunks swept down by the terrific current.

It is a pity truly that such a noble-looking river should be so shallow the greater part of the year, and oppose so many shoals and reefs even to such small navigating steamers as the *Estella*, and one of three remedies, Canalization, Railways, or the use of Dynamite, has been suggested to deliver commerce from this fluvial thralldom. Such a step as canalization would be exceedingly difficult and expensive, if not useless, as every flood would fill up the channel with stones, sand and wood: but the project of building a railway seems more feasible, although many engineering difficulties would arise, entailing more than ordinary expense; numerous bridges would be required, and some of great strength and magnitude; yet, with the present impulse given to trade by the new sugar industry, several planta-

tions and factories of which are about to be or have been started, with all the facilities afforded by the very best machinery, an industry which must soon develop into enormous proportions, there can be little doubt that no long time will elapse 'ere the locomotive will, at any rate, bear the inscription, "Voy á Misiones" (I am bound for Misiones), as it has too long borne the "Voy á Chili."

But with respect to present transport, in the unnavigable season of the Uruguay, and whilst awaiting the advent of the future railway, the Paraná at least offers facilities which are denied to the twin waters. This magnificent watercourse is only some three days' journey for carts in good weather, by land from this side and on a route always open to traffic, even in the heaviest rains, by making detours, in the absence of bridges, round the streams and swamps, which it is impossible to cross when swollen.

For the first three sugar plantations established in Misiones, the government granted the requisite land, and now on these the machinery is already put up and crops raised; but of course such advantages cannot be obtained for further enterprise, but sites can be secured at a very reasonable rate and essentially suitable for the raising of all tropical produce. The territory is completely federalized, and the President's brother Colonel Roca installed as governor, and in many respects, such as fertility, facility of transport, and climate, offers inducements superior to Tucuman and the other northern provinces. The climate is suitable for Europeans, although Santo

Tomé is not quite free from Chuchu, especially when the river is low and exhales malaria from its exposed muddy banks, otherwise on the whole it is decidedly healthy, yet in summer the heat is exceedingly great, and to foreigners the insect pests are a great source of annoyance.

One evening I witnessed the most magnificent purely electric storm I had ever seen; it lasted quite two hours, unaccompanied even by a drop of rain. Several different kinds of lightning and of various colours illuminated the heavens at the same time, but the one most brilliant, as well as fascinating, shot up its main branch in continual succession, in a perpendicular line from the western point of the horizon, splitting up as it rose into an infinity of vivid branches, each of which had its numerous branchlets, again and again subdivided, until the whole sky was covered with a spray of flashes, glorious to behold.

There is a story current here, which involves a Government revenue officer at a small port on the Upper Uruguay, who, on being introduced to a friend of mine, seems to have imbibed the conviction, a mistaken one, that he was a partner in a leading store, doing business in the centre of the theatre of the officer's operations, and at which the golden maxim of "no credit allowed" was strictly adhered to, thereby giving great umbrage to this zealous National official. Now there are few things Argentines love more than extensive credit, so this exciseman determined to make such an impression upon the *quasi* storekeeper, as to induce him to

relax, at any rate in his case, the rule of "cash payments." Well, one day he whispered mysteriously in my friend's ear, and said, "This is a capital locality to introduce contraband goods, you need not be afraid, only give me notice beforehand, so that I may not interfere with you," and finished up with, "Con toda confianza," (with complete confidence). The establishment over which this patriotic officer presides, costs the nation about £600 a year, with scarcely any return, and from all appearances has even a less prospect for the future.

Of the languages spoken in this neighbourhood, the chief is of course American Spanish, but Guaraní, the tongue of the aborigines an agreeable yet sputtering speech uttered through the teeth is more current amongst the lower orders, whilst Brazilian Portuguese, a disagreeable rotund slushy sibilant, is likewise commonly heard owing to the number of imperial settlers; but in addition, the Correntinos have such a peculiar utterance and gesture, throwing up their faces, grinning and chattering with such rapidity, that Spanish in their mouths becomes almost another idiom. On the Brazilian side of the water too, Guaraní intermingles with Portuguese, but Spanish is more or less understood by almost every riparian.

CHAPTER LVI.

UP THE URUGUAY AND DOWN THE PARANÁ.

CONTENTS:—Embarkation for San Xavier—A Brazilian party of travelers—Brazilian bullock-carts—A miscellaneous cargo—A primitive way of crossing rivers—Well trained bullocks—A Jesuit stone wall and its purposes—Deer despising the revolver—Crossing a flooded river—Registering the flood—A long pull, a strong pull and a pull altogether—Cramped quarters—Perched like birds—Another massive stone wall—Nearing the Sierras of Iman—A lurid picture—A tiny native sugar factory—Cashasa loved by Brazilians—Singular fact about frost—The approach of an Englishman—The sugar plantation of Messrs. Morrish and Gelling—A tame Pavo del Monte—Concepcion—A town burning for a month—An unambitious generation—Political economy—The Sierras impassable as yet—Ruins of the ancient town of Concepcion—The result of Jesuit civilization—Local authorities absolute—Treasure-trove—A theodolite a divining-rod—The innocent naturalist *flagrante delicto*—The mania of the Guaranis—"Los Apóstoles" and its bad character—Rice production—Yerba-maté—Concessions.

I had been waiting thus far, and in vain, for a steamer to take us higher up the river, since as the flood was now at its maximum, it would have been so easy for the lovely Mensajero to ascend much beyond Santo Tomé, but fifteen days having elapsed without any sign of aid by water, I made arrangements to proceed northwards to San Xavier, in company with a troop of bullock carts, whose owner was impatient to start, and which had to make a long detour inland, on account of the numerous lagunas

and arroyos at present swollen with the heavy rains, and perfectly impassable by such modes of conveyance. Just as we had embarked on the lumbering convoy, I had the mortification to hear the whistle of the Estella in port, which I knew was freighted with letters for me, but it was now too late to think of obtaining them. Our party consisted of the patron, three cartmen and two boys, all Brazilians, in fact above Santo Tomé and about the Yerbales, Brazilians predominate; myself and servant, and four other passengers likewise Brazilians; but although somewhat numerous, not very lively, as the imperialists spoke hardly a word of Spanish and indifferent Portuguese.

As for the carts, they were miserable, cranky, creaking structures raised on a couple of heavy, rough, wooden wheels of about seven feet diameter, with sides, front and roof constructed of a few canes and sticks bound together with thongs of hide, thatched on the outside with rushes and grass, leaving chinks for the air to pass through, and further to aid the breeze, spaces of four inches were purposely left between the boarding of the floor, a nice and airy enough apartment in summer, but in winter most wretchedly uncomfortable. Each vehicle was drawn by six bullocks, but the mode of harnessing struck me as entirely different from that employed in Buenos Ayres and other parts of the republic: instead of fixing and lashing the yoke to the horns, they here allow it to lie loose on the nape of the neck far back, and only held in position by two stout pieces of wood about a foot and a half long,

which pass perpendicularly through it and fit tight on each side of the animal's clavicle, just where the muscles of the forelegs play, thus impeding movement and seriously chafing both hide and skin, whilst their inferior ends are united so tight by a thong as almost to arrest respiration. The yoke is fastened by a few loose hide thongs to a pole running down between the leading span, which in its turn is secured to the succeeding yoke, and so on until the whole is attached to the solitary shaft of the cart. The oxen are otherwise free save a small thong which, passing through a hole in the tip of the horns, keeps them at a certain distance apart. The driver, who carries a long bamboo goad, does not seat himself on the front yoke as is customary near the metropolis, but rides on horseback by the side of his charge.

On to one of these stridulous, springless conveyances then, ten feet by four, myself and servant climbed to find ourselves surrounded by two or three heavy trunks, a barrel or two, several new zinc pails which chorused with the wheels on the jolting journey, sacks of sundry merchandise, odds and ends, and worst of all some cases of villainously smelling common soap, on which from the first I set a malicious eye, with a view to their speedy ejection. On the top of all this stuff we endeavoured to make a comfortable couch with the aid of rugs, blankets and feather pillows, and as we had plenty of provisions on board, including an arroba of charqui, contentment filled our minds; so starting at 2 p.m. in Indian file, we entered upon undulating open grass

land, where the coarse herbage grew in tufts and served to shelter, within and without its base, the softer grass so enticing to ruminants. The hollows were all filled with streams of water supporting small clumps of trees and brushwood, and on our right lay the flooded bosom of the Itacua, now forming a lagoon. About a league as the crow flies from the town which was still in sight, and on an eminence, we encamped for the night, drawing up the carts side by side and letting the animals loose to feed, when all hands were at once busy collecting fuel or fetching water from a neighbouring stream. After dinner, and in darkness, we squatted around the fire for a smoke, the oxen were then sought and linked to the carts to prevent straying, the horses tethered out, and now all being in readiness for the morrow, we retired to our pillows and passed a remarkably comfortable night. About two hours before daybreak on the following morn, by the light of a full moon, we were again under weigh, the coolness of the air refreshing, as the subsequent fine day agreeably surprised us, after all the bad weather experienced since our arrival in these parts. During the morning we were obliged to pass through swamps, the head waters of a stream that lay in our way, and in fact, to reach the opposite bank of every river in our course, the same primitive method of tracing it to its source had to be resorted to. At ten o'clock a halt, that lasted three hours, was called for breakfast, and to allow the animals to feed, in the midst of a camp more open than before, but less wooded and whose undulations were more gently

swelling; the ground was here pretty well covered with anthills, about two feet high, peeping from among the long grass, and formed of red clay, on the top of which at times stood perched a solitary chimango. Again we creaked along till dusk, having passed an ancient Jesuit burying-ground placed on a rise, then over fine pasture land containing ranchos around which were several herds of cattle and horses, and when nearing our destination for the night, the country became better wooded with here and there scattered but dense copses, but now always posted on an elevated site, and not in the hollows as before, close to one of which we pulled up to find ourselves in company with another similar caravan bound in the opposite direction. Our patron made a proposition to purchase one of their best bullocks for £2 10s., which was acceded to, and the beast was immediately lassoed, thrown on the ground, the tips of its horns sawed off, and holes drilled through the stunted ends with a red hot iron; afterwards, fastened up to a cart for the night, in the morning the stranger took his place in one of the teams to relieve a beast with a very sore back which was left to follow the train of its own accord: indeed it is wonderful how well trained these draught bullocks become; at the sound of the driver's voice they present themselves and when called by names, voluntarily arrange themselves in due order according to their several teams. The night proved rather cold, with a very heavy dew, and starting early in the morning, a rich park-like district lay open before us, undulating grass lands, dotted with sharp-edged

thick deep-green copses, much cattle and many estancias; and here we caught sight of a brace of Rheas, to which one of the boys gave chase on horseback, but a horse is a vain thing wherewith to pursue an ostrich, at any rate on hilly ground. Soon after, we observed the remains of an immense stone wall, of the time of the Jesuits, which even now are quite two leagues in length, evidently constructed for the purpose of enclosing this rich, fat, grazing district, indeed all over the country, especially hereabout, lie scattered, evidences of the magnitude and perfection of the Jesuits' system of colonization; amongst others, remains of bridges over the various streams that intersect Misiones in every direction. Subsequently the undulations became more accented, the land rose into hills, and our road conducted us along the highest ridges (*cuchillas*) between the two rivers Paraná and Uruguay, in fact on our immediate right and left lay a pair of the watersheds of these noble twin streams.

We halted for breakfast at a sort of farm house, where the road bifurcates, one branch leading westward to Itapua on the Paraná, the other north-eastward to Concepcion, an insignificant town about two leagues from the Uruguayan shore, which has to be passed ere San Xavier is reached, and after the morning meal, pursued the latter until sunset when, on arrival at a rivulet, backed up by a fine and picturesque bosquet, so thick as to be impenetrable save with hatchet in hand, we determined there to abide that night. The *cienagas* in this part are all covered with a dense growth of high broad-leaved

grass, greener and more succulent than the wiry herbage generally met with in such situations, and difficult to walk through; this the cattle eat but invariably refuse the other. Our encampment was at a distance of twenty leagues from Santo Tomé, by the winding road we had traversed, and as we lay there in the gloom of the sombre copse in front, which contained some most magnificent timber, straight and lofty columnar trunks of vast diameter, enclosing in their midst tall, slender and graceful palms, o'ertopping the lesser growth, the forms of two deer trotting by were discerned in the dusk, and saluted as usual by my revolver, which they had learned to disregard. On our journey hitherto, not more than a dozen deer were observed, as they, as well as the rheas, have been well nigh exterminated. Before sunrise on the morrow we were in motion in the midst of a dense fog such that we could hardly see, with the ground sopping from the heavy dew, and crossing as before swelling landscape, from which at times cropped up rocky masses seemingly identical with those used in the Jesuit constructions, I picked, en passant, from their crevices, several pieces of rock crystal. A league and a half brought us to the river Chimirai with well-wooded banks, which, in the rainy season, is the worst on the route to pass, but otherwise is easily fordable by carts. As several days had elapsed without rain, we quite expected its waters would have subsided, and in consequence took the shorter track leading to the ford, instead of doubling it at its sources, which would have consumed two extra days; but great was our

disappointment to find it still very much flooded, and a troop of four carts resting on its banks, unable for six days past to advance. After two hours however, our companions becoming impatient determined to make the attempt and harnessed twelve bullocks to the first cart, but before they reached the centre of the stream, the animals had to swim, the water reached to the very roof of the vehicle and the cargo was completely inundated. Here our patron, his son and one of the peons left us to the tender mercies of the capataz and two assistants, to await the fall of the river, in order to cross it without wetting the cargos; so we placed marks, as on the Nile, to register, but after an interval of three hours as there was no abatement, the capataz decided to retrace our steps and seek, as hitherto, the fountain head. Accordingly turning our backs upon the turgid waters and abandoning our brethren, who were busy raising their merchandise by means of logs of wood, but still determined to brave the flood at the risk of losing all, we traversed for some distance the road we came, and then turning off across the slopes towards an affluent of the Chirimai, found it hard work to force the carts through the long grass, but still more unpleasant to endure the tremendous bumping from hidden projecting rocks. Descending into a hollow for about a league, we reached the swampy ground in its neighbourhood, and then advancing to its steep and rough banks which were lined thickly with wood, proceeded to cross it by a ford known to one of the men. The stream was narrow, and although deep

enough to rise above the floor of the lumbering vehicle, was not sufficiently so to carry away the disgusting soap, and by dint of yoking eight bullocks to a cart, under the guidance of three drivers with fierce goads, and a very strong united pull, we landed safely on the other side. Between the affluent just passed and the succeeding which flows into it, lay a tract of land, more or less swampy, in the midst of which we rested for the night; but as the weather, which had hitherto been exceedingly fine since leaving Santo Tomé, now threatened for rain, we made all snug by lining the roof, sides and ends of our frail upper structure, with hides. The next morning broke fine and on arriving at the second stream, the men proceeded to ford it, but finding it too deep for the cargo, decided to pass that day and night on its banks to allow the waters time to subside, and at dusk we saw many capybaras in the swampy lands adjoining it. The threatened storm broke over us during the night, and as the driver invaded our narrow sanctum for shelter, we were so crowded as to be unable to lie at full length, or even turn. The following day the rain had ceased, but the weather remained unsettled, and on visiting the banks which were as usual very steep and broken, with a narrow, but deep and rapid river flowing between, we were vexed to observe that instead of diminishing, the water was rising; so at once harnessing, and raising the cargo, into the flood we plunged, the body of the vehicle was submerged, the merchandise splashed and we ourselves perched like birds, scarce escaped the deluge. After

getting all the carts over, and continuing for three hours over undulating but exceedingly rough and pathless country, where rocks concealed by grass continually tormented us with heavy bumping, we fell in with a cart-track leading from Itapua to Concepcion, by following which we happened upon another stream, an affluent of the Chimirai, neither so deep nor so difficult to cross as the two former. On its further bank we breakfasted, and then urged the cattle over grazing land of the finest, but completely destitute of either a hoof or a habitation, and yet in olden times it was not so, for this was one of the splendid districts enclosed by the vigilant-eyed Jesuits, as evidenced by the ruins still extant of another massive stone wall. Then as we drew near the end of our daily stage, some hills were observed looming on our left, the outlying heights of the Sierras of Iman; and straightway we encamped for the night out in the open, on the top of a slope covered with thick, high grass; in vain however we looked for wood, but having luckily brought some logs with us to elevate the cargo, we used them for fuel. Darkness reigned 'ere our beacons blazed, the night was intensely cold and bleak, and things looked dreary enough as we sat around our camp fires, with the three carts drawn up in line behind, and the fettered bullocks glooming lurid through the thick obscurity. Up as usual before daybreak on the morrow, our path continued over very rough, stony and swampy ground, until another river, the Tuna, taxed our powers to the utmost, as its bed was one mass of boulders, and banks very steep and

broken. About breakfast time however we fortunately struck the proper road, and a little further on met with a group of ranchos introducing us to a tiny sugar factory worked by water power, and principally devoted to the manufacture of Cashasa, a Brazilian word denoting spirit. This small establishment was put up and arranged entirely by natives, and the machinery constructed wholly of hard indigenous woods. The plantation lay higher up on the Sierras, as the cane is always grown where there is no frost, and singularly enough, the Sierras and the river banks escape with impunity the ravages of that enemy to fine culture, whilst the gently swelling undulations are subject to them; and so on either of the former localities it can be planted to any extent, and produces splendidly, giving a yield superior to that of either Tucuman or Salta.

This being our last stage, we hurried forward, and soon from a rise caught sight of the woods of Concepcion, with the outlines of a house or two in their midst, and after passing another stream, and when within a mile of the town, a horseman, whom I at once recognized as an Englishman, approached and introduced himself as Mr. Morrish, the partner of Mr. Gelling, an engineer I knew in Buenos Ayres. Our joy was mutual, but especially great on his part, as he had been living a lonely life in this remote nook, without seeing a fellow-countryman for five months. He had received notice by post from his partner in Buenos Ayres, that I was on the way up, and subsequently heard of my embarkation at Santo Tomé on cart-board, and so was

prepared to meet me. These gentlemen have succeeded in obtaining from government a grant of land lying on the banks of the Uruguay, about three leagues from Concepcion, for the purpose of sugar planting, in which industry they are the pioneers in Misiones; although it is their intention to introduce likewise the culture of tobacco, rice and cotton, by using the very best seed and experienced men. They have already commenced operations, secured favourable crops, and erected the most modern machinery, and no doubt their future is secure; indeed this territory of Misiones has a great career before it, when its resources become better known, so as to attract capital.

After a roundabout journey of thirty leagues from Santo Tomé, occupying eight days, instead of fifteen leagues by the direct road, as soon as we arrived at Concepcion, I determined to remain there a while and let the carts go forward with the bulk of my luggage, especially as the Customs' officer of San Xavier was present and offered me a passage thither in one of his two carts to start in a day or two, an offer I willingly accepted, as well as another made by Señor Torres, a friend of Mr. Morrish's, to sojourn in his house in the interim. The first thing I noticed in this hospitable residence was a tame Pavo del Monte (*Penelope pileata*), which fraternises and roosts with the domestic fowls, and not having its wings cut, flies away by day into the woods to feed, but invariably returns in the evening. This bird has been given away several times to a person residing five leagues off, but only a few hours

elapse before he is back again in his old haunts. Concepcion, although only a hamlet of some forty houses scattered over a large area, and no longer reflecting its ancient grandeur when under Jesuit rule, is yet an extremely healthy place, and suffers not from Chuchu, as does Santo Tomé. An eye witness of the destruction of this Jesuit mission by the Portuguese declared that so vast was it and so massively built, that it burned furiously for a whole month, indeed the fine ruins still extant in the neighbourhood, would lead the mind to concur in such a statement.

Only one of the modern houses however is built of brick; and although the Jesuits, in their time, made both excellent bricks and tiles, the present generation seem unambitious, and are satisfied to erect mere ranchos, formed of frames of wood and cane, filled in with mud, surmounted by a thatched roof; in fact not much better structures than a well-trained gorilla would put together. These shanties are dotted about without any order, although a rumour is afloat that the authorities are determined to rebuild the township in the usual chequered Spanish style, and have actually had it surveyed for that purpose. Political economists have here a field in which to observe the truth of their doctrines respecting the origin of real property, as the mode of its acquisition is so delightfully simple, indeed no less complex plan could have held in patriarchal times. At present no building land is purchased, but a simple permission to build is sought from the Justice of the Peace, who gives the petitioner a paper

entitling to ownership, provided the plot is built on, cleared and fenced. So with regard to estancia lands, herds are placed on unoccupied tracts, and the magistrate readily grants a similar voucher; occupation giving the right of possession; but as the National Government has now federalized the territory, such claims can of course only be recognised as squatters' rights. Title deeds are as yet unknown, but no doubt such will have to be sought in future from the National bureau.

The Sierras lie not far from Concepcion, but are quite impassable, owing to the impenetrable forests which cover them; a pass is said to exist, but it is quite lost and people desirous of visiting towns on the Paraná side, have to skirt and cannot cross them; a large plateau is likewise believed to rest on their summits, but the fact is, no one has yet explored these parts. This southern end of Misiones is very narrow, as the twin rivers Paraná and Uruguay are but ten leagues apart, but the territory widens considerably farther north.

The ruins of the ancient town of Concepcion are very well worth a visit. They extend over about 140 acres and are all built of cut stone in blocks, more or less of the same kind as that used in Santo Tomé, only not so porous, and of a darker tint. These ruins are covered with a thick growth of shrubs and trees, and enclosed in every direction by an immense orange grove, literally smothered in fruit, interspersed with towering palms* or lofty

* Here horses are fed very largely on palm leaves, and the natives say they are exceedingly fattening.

cacti, and embedded in ferns, under the shade of whose graceful fronds and amid the damp moss, crawl innumerable reptiles. To build such a town as once stood proudly here, must have required an exceedingly large number of slaves, for such was the condition the Jesuit civilization demanded of its barbarous adherents. The centre of interest in these ruins lies in the now so-called Plaza, which is of the usual size, and really picturesque. In the middle of it are scattered about, a dozen or more tall palms, beneath whose protection the green sward flourishes; from each of the four corners emanate a pair of roads, continuations of the sides of the square, and all round are the ruins which in places still stand high, although the natives, who have no respect for antiquity, are beginning, as at Santo Tomé they have almost concluded, to appropriate the stone for private purposes. Indeed in this respect a bad example is set them by the Military Commander of the district, who is building a residence in the plaza and using all the best stone, especially the carved work, for which he seems to have a penchant. With the material gratis, soldiers for labourers, and the site usurped, there must result the cheapest form of house save one, where it is stolen all ready made: the fact is, in all the distant parts of the republic, the local authorities, especially of the military class, can do just what they please. All round the principal square stood evidently one vast monastery for the priests, inside which are still to be observed the remains of a vast portico with squared pillars neatly carved; and at each corner where the roads entered

it, was erected a double wall of considerable height and thickness, cutting off the corner of the plaza, into which were let formidable portals; whilst in every direction the ground is strewn with ruins of pillars and other stone work beautifully sculptured.

Luckily however, the interesting and striking church remains, which occupy one side of the Plaza, are likely to be respected, owing to the superstitious fears of the people. The edifice still bears an imposing appearance, fronted by a magnificent flight of fifteen stone steps fully fifty yards long, at the top of which spreads out, in front of the temple walls, the base from which sprang the peristyle, quite six yards in breadth. Three entrances admitted to the sacred precincts, the central and principal of which is still surrounded by a mass of carved work, and between each of the double, carved, stone jambs yet remain a pair of images, arranged one above the other in niches, the whole four figures retaining almost intact their normal form, and much of their original brilliant colouring. The church extends very far back, and behind are numerous rooms and cells of various shapes, all built of cut stone, and beyond these and still retreating, an impenetrable and enormous mound of wood and stone debris. Close in front of it lies on the ground, with now silent tongue, the lower part of the immensely heavy belfry, and by its side the remains of a beautifully carved font, numerous interesting tracings and some curiously rounded smooth stones, without

doubt the missiles which the Indian neophytes, combining muscular with spiritual Christianity, shot from their slings.

Outside the whole of the ancient town, which does not appear to have surrounded the Plaza, but only to have been projected on one side, are the remains of a deep ditch, relied on as a fortification.

Numerous stories are current of piles of buried treasure, and every foreigner that visits Misiones is credited with the design of searching for it; indeed such the people believe to be the object of Messrs. Morrish and Gelling, and that the sugar plantation and factory they have established, are merely blinds to their real intentions; so for some time after their arrival, their steps and actions were narrowly watched by these ignorant natives, who actually stole their theodolite, fully satisfied that it was an instrument which indicated the site of the coveted hoards. Of me they had no doubt! for had I not often been taken *flagrante delicto*, as with geological pick, in pursuit of some rare beetle or plant, I ransacked every hole and corner? How often have I lifted my head supposing myself alone, only to become aware of sinister eyes and scowling features glaring upon me?

This hunting for treasure-trove seems to be a common failing of the Guaranis, whether in Misiones or Paraguay, the idea haunts them, and that they spend a great portion of their time in prosecuting a search for it, is manifest from the numerous caves and holes which attest the fact in every ruin.

There must be some foundation for such a habit, and it is most probable that the Jesuits were accustomed thus to conceal their wealth.

Five leagues from Concepcion on the high road to Santo Tomé, occur other extensive ruins enveloped in dense woods: the spot bears the name of "Los Apóstoles," but its modern reputation no longer entitles it to retain so worthy an appellation, as at present its cover harbours robbers and bandits, whose ranks though thinned are still intimidating, and travellers in that region are obliged to go well armed.

Rice grows very prolifically around Concepcion, but very little land is as yet under it, as the natives are too indolent for the labours of agriculture; as an experiment a gentleman lately sowed four pounds of it, taking care of the plants as they sprang up, and reaped 312 pounds. Cotton, mandioca, mani, sugar, bananas, oranges, tobacco, and all sorts of vegetables do equally well, and coffee is about to be tried, but wheat does not succeed. A small plantation of Yerba-maté left by the Jesuits lies close at hand, and not only yields splendidly, but as a contribution to the landscape presents, as an evergreen, a very beautiful appearance, with its pretty, dark-green, shining leaves, like those of the laurel.

A concession of a hundred square leagues of land was lately made by the Provincial Government of Corrientes to a company for the purpose of colonization, in return for which the grantees bind themselves to bring out a thousand families and settle them within four years; some of this land

lies close to Concepcion, and the undertaking will no doubt, if carried out, infuse life into its torpid inhabitants; besides this, four other concessions have been granted for sugar cultivation, two of which belong to English companies; and indeed I have seen no more promising field for the employment of British capital.

CHAPTER LVII.

UP THE URUGUAY AND DOWN THE PARANA

CONTENTS:—Visit to San Xavier—Concession of Messrs. Morrish and Gelling—Fariña and Yerba mills—Particulars of Maté growth and trade—How to stain maté gourds—Mandioca juice very poisonous—The principle of barter necessitates stores—Roasted bodies of snakes—Cerro Monja and its healing spring—Ingenious guttered roof—A chorus of battling seals—Canoes—Timber exuberance—The remains of a colony—Wood-cutting—Rafts—Wanton destruction of timber—Labour—Búgres and cannibalism—Fauna—Monkeys and their habits—Parasitic vermin—A “correccion” of black ants—Credulity and superstition—A philter—Jesuit ruins.

After a few days’ sojourn in Concepcion, one afternoon I started off on horseback in company with Mr. Morrish, for a ride of ten leagues, in order to visit San Xavier, which lies further north on a bend of the River Uruguay: but on this as other subsequent trips in Misiones, the published maps of that territory were all found very inexact and so I set myself to work to correct the latest, that of Del Vasco.

Some of my luggage had already gone forward in the carts we travelled in, and the remainder was to leave in others, the same day as ourselves.

The country passed through consisted of intensely green, well-wooded and well-watered swelling lands; nay, in all my experience of the republic,

never have I seen a territory so magnificently watered; it was winter it is true, but in summer there is but little difference, as all the arroyos (rivulets) are permanent, so that perpetual verdure reigns. Five good sized streams besides numberless smaller ones intersected our path between Concepcion and San Xavier, the two principal of which, the Santa Maria and Itacuararé, enclose between them the concession of Messrs. Morrish and Gelling, consisting of ten square leagues of land, with a good frontage on the Uruguay and running right back to the high wooded hills; and on the banks of the former these enterprising engineers have already erected their factory, in order to make use of its water power. Higher up this same river, there are extensive and very interesting ruins of another Jesuit town, but as they lie in the midst of an impenetrable forest, little is as yet known of them.

I was surprised to notice that the country skirting our road was populated here and there, until I learned that it formed the centre of the Fariña (Mandioca) and Yerba mills; in fact on almost every small stream one of them arose to utilize its otherwise waste energy.

The maté supply is brought down from the Upper Misiones, sometimes in canoes or on rafts, but principally on muleback, through the rough picadas (tracks) cut amid the dense forests leading to the Yerbales (Yerba woods), that lie some thirty leagues above San Xavier; from which place northwards to the limits of the republic, human foot has never yet invaded the immense virgin forests of

cedar, pine &c., which completely cover the land, with the exception of some few hills and streams without number.

The crop is usually gathered by gangs of about fifteen men sent up hither to the Yerbales, each under the charge of a capataz, but some few live there all the year round in huts; their pay is £3.10 a month, besides food, tobacco and spirits, and for this, they have to bring in six arrobas (25 lb. each) of yerba leaves daily: should they however exceed this quota, they are allowed to sell the surplus to the capataz. Only the large full-grown leaves are collected, shoots and immature foliage remain untouched, and the same tree can only be despoiled once every three years. The harvest commences in January and lasts till about the end of July, and immediately the leaves are pulled, they are quickly dried over a fire, after which long hard-wood wands are employed to break them up, so as to render their transport to the mills easier. As may be supposed, there is much waste in culling the yerba: instead of stripping the proper leaves only, the improvident labourers break down great branches which they place bodily over the fire, and then select what they require. One or two enterprising people are beginning to plant yerbales in the vicinities of San Xavier and Concepcion, with good prospects of success, although the trees give no yield until the fourth year.

In order to stain the maté-gourds, whose natural colour is yellowish red, they are simply immersed and left in a moist bed of used yerba-

grounds, until they become of a shiny black, and upon this surface the natives grave, with very rough tools but very skilfully, various fanciful designs; the edge is then bound with silver and the bowl is ready for use.

It may perhaps be interesting to give the reader an idea of the simple yet effectual mechanical means employed in the mills of this district, to prepare Mandioca and Yerba-maté for the market.

In the manufacture of the Fariña or Cassava, either of which is the name given to the fecula manufactured from the oblong tuberous root of the Mandioca (*Janiplia manihot*), the splendid root, of the size of the human head, is first scraped by hand with knives and then placed in long troughs filled with running water, and moved about with a stick until perfectly clean. It is then taken to the first machine, a circular rasp, which reduces the whole to a pulp, and in this state is transferred to a strong box into the lid of which works a powerful screw, every part of which press, including the screw, is made by hand of hard wood; and when the screw is applied, the liquid, driven from the mass, escapes by means of holes in the floor of the box. The compressed starchy material is now passed through a sieve, the fibrous parts thrown away, and the fine subjected to the heat of an oven to dry them completely; this oven, of a cylindric form, has a fire beneath and a shaft provided with spiral arms running through its centre, which, being kept constantly in revolution, thoroughly disintegrate, and allow the heat to penetrate to, every particle of the fecula,

thereby ensuring perfect freedom from moisture, without which the process is incomplete. The oven is fed from the top and discharged from the side, and when the operation is finished, on opening the door, all the remains are ejected by the rotating arms.

It is somewhat singular that in Mandioca, as in Tapioca, which is in fact a Cassava, only differently prepared and granulated, the juice should be so very poisonous and the *farinha* not only innocuous but positively alimentitious, so much so indeed as to form the chief food of entire peoples, such as those of Misiones, Brazil, Bolivia and Paraguay.

The Yerba-maté, on the other hand, only requiring to be reduced to powder, is free from the extensive manipulation of the Mandioca, and only necessitates one machine, on the old system of the Pestle and Mortar. The pestles are squared pieces of hard timber, about seven feet long, shod with iron; on the back of each is fastened at right angles an arm, and behind the row of such pestles is the water-wheel shaft, also bearing arms which, as the shaft revolves, raise the pestle-arms and with them the pestles about a foot, and then after contact allow them to fall again, each pestle rising and falling three times during one revolution of the shaft. The mortars are blocks of hard wood, hollowed out to receive two pestles each. A large mill works from sixteen to twenty pestles and will grind 100 arrobas a day. After the maté is ground, it is stowed into hide bags and well rammed, and then it is fit for commerce.

As we jogged along and crossed stream after stream, many of the fords were discovered to be actually paved with stones: indeed the Jesuits seem not to have failed in the slightest minutie of an outward civilization: and as we did not hurry, on arriving at a yerba mill only five leagues from Concepcion, there was no hesitation on our part in accepting the invitation of its hospitable Brazilian master to stay the night. The house was a very large and comfortable wooden building roofed with zinc, and perfectly clean into the bargain. A well-stocked store formed part of the premises; in fact, the number of such in this district quite astonished us until we were told that all the men employed upon any industry receive their wages in goods and not money: money certainly is very scarce and the old principle of barter much resorted to.

Early next morning we started to accomplish the remaining five leagues, but after traversing two of them over a country identical in features with that of yesterday, only more extensively wooded, pulled up at the residence of a Spanish estanciero named Don Manuel Fraga, where we breakfasted. This estancia is by far the largest, best stocked and conducted, of any in these parts, and Don Manuel, like Cræsus of old, took a pleasure in showing us over it. The house, built of wood and very commodious, was roofed with tiles taken from the old Jesuit ruins of San Xavier, and they appeared as good as new, whilst the flooring of a great part of the house was of stone-slabs, obtained likewise from the same source. After breakfast we bade

adieu to our host and crossed more streams, with a bolder and still better wooded landscape than before, wherein many wide and blackened areas of burnt grass and cinders and the charred remains of trees and bushes, round which the roasted bodies of snakes were still seen entwined, called our attention to the custom of the natives, who by setting fire to the old coarse herbage, secure a speedy crop of new. Some pretty views of fluvial scenery, with the Brazilian hills in front, were here obtained, and after passing a few houses, and diving into a thick wood enclosing the ruins of the old Jesuit town of San Xavier, we emerged in the vicinity of its modern namesake, the centre of the yerba trade, although only a wretched hamlet of some nine scattered mud ranchos, situated on high land, about three-quarters of a mile from the banks of the Uruguay, which however although so close is invisible from it. Nevertheless from San Xavier, a nice picture of densely wooded lands and hills is gained, especially towards the north, where stands up boldly the mass called the Cerro Monja, distant about a league hence and towering above all surrounding hills in the neighbourhood. Near its summit there is a spring, whose waters are credited with miraculous healing powers, and by its side a small chapel, both of which are much resorted to, especially by the infirm. Of the scanty dwellings in this miserable sub-hamlet, four are stores, kept by men whose sole business seems to be to cheat, and in that they succeed. In San Xavier there is no respect for law, probably because the three representatives thereof are continually

breaking it by quarrelling amongst themselves and enlisting partisans, so that society is in a completely demoralised state.

The Justice of the Peace, who is a Brazilian, resides two leagues off at the house of Don Manuel Fraga, where I breakfasted; the Fiscal, likewise a Brazilian, resides in San Xavier, as does the Custom-House official, a Correntino, in whose abode I took up my residence. Thus the Brazilians exercise the chief power in this place, as well as throughout the northern part of Misiones, and actually carry their pretensions so far as to call the Argentines, *Gringos*, on their own soil.

This, by far the largest and most respectable dwelling in the village was built of posts and cross-bits of wood bound together by lianas and then plastered with mud, a structure continually falling to pieces, so that during my sojourn, the walls were full of holes. The roof however was constructed in a very ingenious manner, of palm trees split longitudinally and then laid lengthways in two rows, one above the other in ridges, the top rows having their convexity laid upwards, the lower downwards, and the whole fastened together so as to imitate ancient imbricated gutter tiles: but then as the wood became warped, the fastenings were drawn, and the structure, never watertight, ended by being converted into a sieve, and in this condition I found it.

We had not been here located many hours before an unearthly noise resembling a mixed chorus of barking and grunts assailed our ears, which pro-

ceeded from a herd of seals* battling their way up stream, and the natives remarked at once that bad weather was in store, a prediction shortly verified.

To reach the port of San Xavier, it is necessary to pass through dense and lofty woods, in the midst of which are embosomed extensive orange groves, from whose gloomy recesses the traveller suddenly emerges to find himself on the banks of the Uruguay, where a beautiful bend of the river, about four hundred yards broad, opening out to view with thickly timbered shores, reveals no boats afloat on its bosom, nor other signs of traffic, save three or four canoes hollowed from single stems of the Timbo. The general length of these is from thirty to thirty-six feet, but those hewn from cedar logs, and which are preferred, reach the extraordinary length of forty feet and are capable of carrying three or four tons of yerba.

Although I had been accustomed to the vast and imposing forests of Salta, Jujuy and especially Oran, this region struck me as even more luxuriant, not in such arboreal magnificence, but in universal density and impenetrability: indeed the exuberance of timber is such, that the very names of the trees are as yet unknown to Europeans, and even the majority of those with which they have become familiar, are only recognised by their Indian vocables; such as Timbo, Lapacho, Natambo, Andigo, Uruñday, Capanistula, Grapeapuña, Cabrena, Loro, Gacarandá, &c.; but besides these, three species of

* There are two species of seals in the Uruguay, one a large kind with yellowish spots on the throat, the other much smaller.

Cedar, the Pine peculiar to Misiones, and the Laurel are abundant and await the woodcutters' axes of generations to come. There are however a few insignificant gangs of men who now devote themselves to lumbering, amongst which are four Italians, residing about a mile north of San Xavier, the sole remaining representatives of a colony of their countrymen, settled in these parts ten years ago: but as so very little guarantee for life and property then existed in the lawless territory, honest working men were afraid to remain, and so the colony dwindled away. This little knot of hardy woodcutters laboriously toil their way up the river in canoes, provisioned for several months, some thirty leagues hence, to a place of a few huts called the Alto Uruguay, from which port is shipped the yerba that comes down by water; and penetrating some small stream dive into the midst of the forests that line its banks, erect their huts and selecting the finest trunks, cut and square them into logs, which are then floated down to the main stream. Here they are built into a strong raft consisting of many hundred logs, principally of cedar, and bound together by tough lianas, on which is erected a shed; and as soon as ever the Uruguay floods, experienced men are shipped with their long poles and sweeps to guide the frail structure, and the whole is launched down the impetuous current, on its fearfully perilous mission, until after shooting the rapids with frightful velocity, whirled, twisted, jerked, bumped and battered, it arrives at its destination, which is usually Santo Tomé, but in default of a market there, Concordia.

This mode of life, although excessively rough, lonely and dangerous, is very remunerative, as the duties paid to government are but slight and the expenses insignificant: yet it grieves one to notice in Misiones a like wanton destruction of the woods as of the ruins; for the indolent natives often cut down fine orange trees of a century's growth, or other forest magnates, merely in order to save the trouble in the one case of knocking down the fruit with a cane, or in the other of climbing the trunk to obtain the wild honey, which is found in such rich abundance in almost every forest; and then they allow the timber to rot on the ground. But whatsoever industry be projected, whether woodcutting, sugar growing, yerba and mandioca raising and manufacture, or purely agricultural pursuits, in close relation to them all stands the question of labour, one of the most important for the future of Misiones. Now indigenous labour is scanty, inefficient and extravagantly costly: the market is completely spoilt by the Yerbateros, who create a great deal of competition amongst themselves, giving high wages in advance, so that a large number of the men after receiving their pay, proceed to the yerbales, consume all the provisions sent up, and then slope for Brazil, and as there is no law these parts, employers are helpless, and many become beggared by a vicious system which seems only to rear a race of consummately impudent, indolent and independent labourers. However productive Guarani enforced toil may have been under Jesuit rule, the people now are in no way remark-

able for habits of industry, and as the bare means of living are easily attained, native idiosyncrasy, manifested by bouts of blubbering, dancing, potations deep and treasure seeking, are allowed full play, so that it is in vain to look for a patient, willing, laborious class amongst the natives, and the possibility of the importation of Coolie or other labour suitable for field work under a hot sun must become a question for future, if not immediate consideration, as soon as any considerable immigration of European settlers takes place.

Again of skilled labour there is absolutely none: I asked a carpenter in San Xavier to make me two flat cedar boards of equal size, with a cross piece to prevent splitting, for the purpose of pressing plants; he actually put the grain of the intensely rough cross piece, the same way as that of the tablets, and left the whole unplanned, although he possessed good tools, which I asked him to lend me to finish the work before him. He then charged me two Bolivianos, but as I was not at that time aware that the four real silver piece, elsewhere called a half Bolivian, was reckoned in Misiones as a whole one, I proceeded, according to custom, to bate his charge (as I supposed) one half by offering him one Bolivian, which he smilingly pocketed, slyly remarking, that that was his original demand; whereupon I felt sold.

A little above the Alto Uruguay, but on the opposite shore, a Brazilian military colony of some 500 men is posted, and about a day's journey by canoe still farther north, lies the Salto Grande, con-

sisting of immense falls and rapids, the noise of which can be distinguished at a distance of four leagues, but very little is as yet known about them; whilst the district higher up, completely unexplored to the present, encloses vast and dense forests, in which roam the remnants of a tribe of savage Indians, called by the Brazilians Búgres*, and which, even towards the close of the nineteenth century, are credited with cannibalism.

The limits of the republic on this, one of its twin Boreal horns, are not yet clearly defined with the Brazils, and most likely will lead at some future time to questions of threatening import.

With regard to the fauna of Misiones; snakes, especially rattlesnakes of large size, abound; pumas and jaguars are very numerous in the forests and on the sierras, but rarely approach human dwellings; *coritis*, *antestors* and *tapirs*, are by no means uncommon; birds are plentiful, but many of them identical with those in Oran; squirrels and a cavy, with long ears, but of what species I could not determine from the description of the natives, occur frequently, but the latter was so shy that I was unable to secure a specimen; whilst monkeys (*Myodes orecopid*) are found all along the banks of the Upper Uruguay and howl in deafening concert, as they go swarming along in large troops amongst the lofty branches. One of the plans of these quadrumanous for obtaining food, as well as many other of their habits, is remarkable. The monkeys,

* A people long since by the Brazilians for all savage Indians.

bound on a predatory excursion, go in troops to visit a maize field on the outskirts of some wood, and proceed at once to throw out a long chain of skirmishers extending out of the forest into the centre of the growing crop, carefully stationing a look-out on the top of a neighbouring commanding tree. The cobs are then passed from one to the other, until they finally disappear within the leafy precincts, much in the same way as Italian masons deliver bricks. But woe to the unlucky wight mastheaded, if too intent on the plunder he has failed to give notice of impending danger, for after reassembling in the forest, his brethren fall upon him and administer such a severe drubbing as to leave the incautious sentinel half dead.

Of the lower forms of animal life parasitic on man, although the garapata was not, as in Oran, nevertheless the Pique, Jigger or Chigoe (*Pulex penetrans*) pretty well atoned for its absence. Strange indeed it was, but the natives suffered very much more from its attacks than I, although my servant, a Gallego, had his feet completely honey-combed with holes and sores. The only remedy indeed is to cut them out, otherwise when their egg-mass, to the size of a pea, is deposited, angry wounds result which sometimes terminate in mortification. A favourite retreat of these almost microscopic pests is under a toe nail where they lie buried in the quick or in some one of the callosities where the boot presses. On entering the flesh, a slight itching is sometimes felt, but by a person unaccustomed to them, this is generally unnoticed; gradu-

ally however a trifling pain sets in, leading the victim to imagine that his boot is rather tight, succeeded by a sharper monitor, and then it is high time to examine the feet. The appearance they present at this stage is that of a small whitish speck furnished with a minute black nucleus, and although the residents avow that the operation of extracting them by cutting is rather pleasant than otherwise, to me the process was very formidable, especially when perhaps half the nail had to be sliced off, as a preliminary step to digging them out from the hyper-tender flesh beneath. These nasty pulices are however only found in houses, especially dirty ones or in those that have remained unoccupied for some time, in both of which they swarm, but are never observed in the fields or woods. It was extraordinary to me to witness the excessive degree to which the inhabitants of San Xavier were subject to these pungent plagues; in fact they were busy every spare moment all day long extracting them, whilst my person was only molested to the extent of perhaps a solitary dozen or so; but this immunity I attributed to three things, thinness of skin, daily ablution of the feet in warm water, and wearing good socks. Certain it is that the piques show a marked predilection for thick skins, and as the indigines usually go barefooted, and their soles thus become hardened and consolidated, they are rendered more liable to the attentions of this very lively flea, which is infinitely more difficult to catch than the ordinary domesticated *pulex irritans*.

Another insect plague to which the inhabitants

of this territory are more peculiarly subject is, what is called, a "Correccion" of large black ants. We were one night sitting inside the house listening to a little music, as several of the neighbours had come in to pass an hour or two, when suddenly a shout arose of "la correccion," and we instantly began to experience a great deal of pricking all over our legs, which were found to be covered with those nasty ugly-looking *Ecodomas* that were hard at work with their nippers so as to keep us continually on the jump; and during the two or three minutes we were rushing about to get our beds outside the house, the whole interior became one dense black mass swaying hither and thither with intense and excited activity: they dropped from the roof upon the table and floor in such immense numbers as to make a pattering like rain, and not content with attacking our outposts the legs, laid siege to the very citadel and poured over our persons, whilst up the walls and posts was passing an inky but living stream; so sudden was the inundatory swarm, as though it had been caused by a shower of ants; not two seconds could we remain inside, but rushing out and closing all avenues, we left the ebony parliament to determine upon future measures with closed doors, whilst it took us more than half an hour to rid our bodies and clothes of the disgusting vermin, after which we retired to sleep under a corridor at a distance from our tormentors.

A fact noticeable throughout the republic, but much more accentuated in Misiones, is the extreme credulity and superstition of the entire population;

and as they have no doctors, they resort to men who pretend to some knowledge of the medicinal qualities of plants, but who principally resort to charms to establish an equivocal reputation. I was much amused at their complete faith in reliquias (charms), which they carry about with them, and this is not confined to the lower orders, but is universal likewise amongst men who possess some little education and hold responsible government positions, as for instance the Customs' officer with whom I was lodging in San Xavier. He told me of and showed me two things he never parted with, but carried one in each pocket, viz., a revolver and a little box containing an amulet. Upon expressing a desire to see the latter, the lid of the box was carefully unscrewed and a paper unfolded, exposing to view, what?—a potion, a powder, a sacred stone, the thigh bone of an enemy?—no!—only three small feathers which, upon investigation, I discovered to belong to a small and pretty owl (*Noctua passeroides?*), which has a peculiar habit of sitting on a branch and uttering such a strange sirenian note as attracts a host of little birds around it, when it proceeds to swoop down upon the fattest, to make a meal of it. The moral is evident; the dupe firmly believed that by wearing this fetich, he possessed the power of drawing around him a crowd of his own species, and as he is the proprietor of a small store, he would thus be enabled to play the owl among the small birds.

The Jesuit ruins of San Xavier, situated in the midst of a dense wood, are interesting, but in a bad state of preservation, in fact moss-grown and nearly

all destroyed: one building however remains, on which the attention is centred, whose walls still rise to a considerable height, and are in tolerable condition, so that, revealing something of its purpose, greater satisfaction is experienced in examining it. This building seems to have formed a sort of chapel or oratory, where infants were baptized: and along one wall are the remains of a very large font, evidently supplied by a running stream conducted along the interior of the wall, probably by means of stone gutters to which were attached three taps to admit water into it. At one corner of the room obviously existed a turn-stone, and outside the building a large courtyard. It is more than probable that thus the parents stood in the patio and handed their infants through the turn-stone to the priests, who proceeded to baptize them within. Underneath and close by was a kind of crypt, built completely in stone, with numerous niches round the walls.

About eight leagues to the north of San Xavier, in the midst of impenetrable forests, are known to exist the ruins of another extensive Jesuit town, which however have never yet been discovered, although the position of the place itself is marked, with the name of Borrarai, on an old and very rare Jesuit map; nor have the mines as yet been traced which those ardent pioneers worked in that neighbourhood. These are the last lithologic remains proceeding northward, with the exception of those of two or three houses up at Alto Uruguay, near the Salto Grande.

CHAPTER LVIII.

UP THE URUGUAY AND DOWN THE PARANÁ.

CONTENTS:—Departure from San Xavier by canoe—A low metacentre—Towing *charqui*—The three terrible *cachuelas*—An anticipated haven denied—A frugal dinner—A night's lodging in a canoe—Elementary sugar manufacture—The rapids of Santa Maria—The San Isidro "Iron Gates"—A frightful tossing—A struggle to reach San Isidro—A seven miles' walk under a broiling sun—Concepcion and its races—Gambling to the bitter end—Defeat of the republican horse by the imperial—The Concepcion conception of a spree—The "drum ecclesiastic"—Exploding bombs—Climate of Misiones—Departure for the Paraná—The Jesuit town of San Carlos—The Father of Waters—A town with three names—Description of Itapua—To which of his ancestors is man indebted for his seat on horseback?—A novel Brazilian invention—Paraguayan women and their physique—Locos ingleses—A mysterious Pharos—Itapua dependent upon the yerba-trade—Preparation for the exploration of the Falls of Yguazú.

After spending a fortnight in San Xavier, and not being prepared, neither having time for, an extended and very hazardous trip farther north, I determined to retrace my steps by river to Concepcion; so I hired a canoe to take me down to the port of San Isidro which, distant ten leagues by water, was the nearest point to my destination, in fact only two leagues from it. The canoe, which was thirty feet long, four wide and three deep, and hollowed from a single log of Timbo, was worked by two men, one rowing and the other steering with an

oar, who agreed to take me the thirty miles for £1 15s.; but besides this, I had to pay a Harbour Due of three shillings, which was simply a piece of wicked extortion on the part of the Customs' officer, under whose roof I had passed a miserable fortnight in the midst of intrigue and calumny. After having got all the luggage properly disposed, we squatted at the bottom of the canoe, there being no seats, indeed these vehicles have a nasty knack of turning completely over, if the metacentre is not kept very low, and off we started at 3 p.m. on a beautiful afternoon, shooting out at once into mid-stream, to reap the benefit of the full force of the current which sped us onwards like an express train.

As we had only been able to obtain charqui as food for the journey, and it looked very tough and hyper-saturated with brine, we proceeded to tow it at our stern, hoping that the pure waters of the Uruguay would render it both palatable and digestible.

The river scenery, from its bosom, was delightful, as both banks were well-wooded, the Brazilian shore hilly, islands numerous and the water, reflecting the deep blue vault above, became converted into fluid lapis-lazuli; when suddenly there arose a lofty hill directly in front that appeared to bar our progress completely; of this however the current took no notice, but sweeping us swiftly round it, revealed new enchanting fluvial pictures, an impetuous stream not less than five-hundred yards in breadth, both banks rising up finely timbered, the

foliage lapping the very water and admiring its own beauty in the azure mirror, islands and the numerous mouths of rivulets, which for ever pour their peaceful contributions into the lap of the impatient main.

Of the three *cachuelas* (rapids) met with on our way down, two were exceedingly dangerous, especially those of San Isidro which, lying a little above the port whither I was bound, are with justice feared: these rapids are in fact the worst on the whole river except those of Salto Grande near Concordia, and the falls of the same name in Alto Misiones; the last mentioned of which have a very lofty cataract, underneath which people can walk as at Niagara.

Just at sundown, on darting past the extremity of a long island situated in mid-stream, we espied a house on the Brazilian shore, whither we were minded to drive the canoe, to seek hospitality for the night; so the boatmen essayed with all their might to row across the stream to fetch it, but no sooner did the canoe feel the current of the other channel, than it first shivered, then whirled about so tremendously hither and thither with such a snake-like motion and lightning speed, now with bows now with stern pointing up stream, that the lofty trees on shore appeared to quiver, dance and dart with exactly contrary but equally rapid motion, so that if I had not instantly withdrawn my eyes from the scene, I should certainly have been seasick. All our endeavours were however futile, and as we shot past the anticipated haven, we managed at last to

got pretty close in shore, watching meanwhile eagerly for some open spot to thrust in the canoe and prepare dinner. For quite a league our search was fruitless, at last a clear space of a few square feet presented itself, and with a supreme effort the nose of the canoe was driven against the bank, the stern shot round, an instant more and she would have renewed her mad career, had not one of the men seized an overhanging branch. To haul up our slaves' food and climb the almost perpendicular, wet, clayey bank, five or six feet high and slippery as glass, delayed us not, and as it was now dark all hands were employed seeking fuel, but none was to be had, as the forest around us was completely impenetrable especially in the dark, save a few twigs and branches with which we managed to warm the charqui, but to eat it was impossible. The detergent waters of the Uruguay were at fault, for five long hours had they tried their utmost upon the leathery mass without removing a particle of its salt or diminishing its coriaceousness one iota, so that we had to remain satisfied with a galleta or hard bread cake. How we descended that slippery bank again and in safety, I know not, one man however would inevitably have been lost, had we not managed to clutch him by the scuff of the neck just in time. The canoe gave us a night's lodging, but so cramped was our position that sleep deserted us, and so very early next morning we were quite ready to renew the journey. Houses now occasionally occurred on both banks, usually on a clearing, with a moderate plantation of sugar cane adjoining, furnished with a

small trapiché or press; but as the people do not yet know how to manufacture sugar, they busy themselves with turning out a stuff called *Rapa dura* or rather *Guarapa dura*, which is nothing but the juice boiled down to charring point, when the whole mass is turned out and cut into hard cakes, which have a flavour of molasses or coarse brown sugar, and are very sweet and mealy: so for want of a little ingenuity, the sugar consumed in these parts is obliged to be brought from below, notwithstanding the cane grows splendidly here and yields some 12 °.

Like an arrow we shot the rapids of Santa Maria, a little below the mouth of a river of the same name, but in the midst of the seething waters formed by a double line of reefs some distance apart, the canoe danced and wriggled frightfully. The current was now stronger than ever, and in a short time we came in sight of and heard the menacing roar of the foaming rapids of San Isidro which like the Danubian "Iron Gates" strike terror into the heart of the mariner. These in like manner consist of a double line of reefs, with a rough and sudden descent of waters between them, and as we approached the boiling, heaving, troubled mass, the prospect looked almost appalling for such a frail bark as ours; so, whilst we made for the channel, or rather the place where the fewest rocks were apparent, we prepared for the worst by lashing fast everything in the canoe, and then lay down flat at its bottom. The mariners endeavoured to steer the canoe clear of the numerous rocky points and islets that showed their noses every instant above water through the

dashing surf that enveloped them, and to touch which would have been certain death, but fast in the grip of a firmer power, and disobedient now to the pilot, she merely shivered and shook her head and tail impatiently, as the eddying billows drove her hither and thither. The tumultuous way in which the waves tossed us about and threatened to overwhelm us, reminded me of the ocean again, in fact the natives do term it *marejada* (swell of the sea), and had it not been that we were driven along at so terrific a speed, at the same time that we suffered such an awful pitching, rolling and jerking, I should have been obliged to yield up last night's galleta. However we were more fortunate than a German settler at San Isidro who, a year ago, was drowned at this spot, as he was coming down with two boatmen, and tried to cross over through the rapids to the Argentine side; the canoe was instantly capsized, he was lost, and his body recovered five leagues further down, whilst the two men miraculously escaped by clinging to their oars, and were thrown ashore semianimate, a long distance off the scene of the accident.

After escaping the perils of these eddies of Charybdis and rocks of Scylla, we found ourselves hugging the Brazilian shore, and scuttling along under the impulse of the impetuous stream, but such was not to be our course, and we at once endeavoured to cross to the Argentine side, by pointing the canoe's head upwards in a direction to hit the port of San Isidro. The labour of the men was excessive, but by means of extraordinary exer-

tions we at last managed to reach a point about five hundred yards below the mouth of the arroyo on which stands the village, and then by warping our bark up the banks with the aid of the numerous overhanging branches, landed safely at San Isidro about 11 a.m.

At this wretched place consisting of only two or three houses, I at once set about looking for a cart to transport myself and impedimenta to Concepcion, but could not find even a single horse, as nearly everybody in the hamlet had gone thither to attend the races that had just begun there; so that as I was unable to command the services of any other animal than shanks' nags, I decided at last to walk over to Concepcion, a distance of a league, according to the persons questioned at San Isidro, but which turned out, as usual, nearly three times as far. I was attired somewhat as a soldier in heavy marching order, with thick and new top boots, an overcoat and poncho, a rifle and cartridge belt containing about fifteen rounds, a large knife, revolver and cartridge box, so that I was grievously encumbered for a walk of seven miles and upwards. One of the boatmen, who had to deliver a letter in Concepcion accompanied me, and we started with the broiling sun directly in our faces the whole way, passing over undulating but rough country, and arrived about sundown, both thoroughly exhausted, dying with thirst, sopping wet with perspiration, and my heels all over sores, indeed on one foot I could not wear a boot for a month afterwards.

The races, which lasted for five successive days,

commencing on that of my arrival, seemed to be the only concept the horsy brain of Concepcion could at present entertain; the principal ones had been arranged months before, and during all that time training had been vigorously prosecuted, but as the opposition horse had been sent by the Brazilians from over the river, the struggle partook of somewhat an international character, which mightily increased the interest of the meeting, so that almost everybody within leagues attended and the betting was fast and furious. Talking of gambling, there is an intensity of devotion to it on the part of the inhabitants of Misiones, which is quite terrible to witness, and which exhibits itself unrestrainedly in horse-racing, cockfighting and cards. The deeply earnest, yet blind mania that possesses them, especially when betting on horses is astounding; if they lose, they never cease wagering until not only the whole of their money has vanished, but bullock carts, bullocks, saddles, nay the very horses that have run, have been tossed into the vortex, and at last having nothing else to stake, sell themselves into a year's bondage.

Besides the principal races, numerous others were got up impromptu between the saddle horses present, for various sums ranging from a dollar (3s.) upwards, and on these too much money changed hands amongst outsiders. The race-course was perfectly straight, and the distance run never more than half a mile, generally less, and it was lined on one side with huts and booths wherein much eating, drinking, dancing and gambling, were in vogue.

Although I did not notice thimble-rigging, many were the ingenious devices to entrap the unwary, roulette, rouge-et-noir, *et hoc genus omne*; but one apparatus was quite new to me and consisted of a table whose square top had an inclination towards a well about the size of the human palm, and running towards this pocket, down the centre of the table was a long tunnel into which seven marbles had to be thrown in a body, with the object of allowing only an even number to enter the hole.

The race-course itself too was a busy scene, thronged as it was with hundreds who made it their residence during the five days, as well as a migratory multitude comprehending the whole neighbouring population from the highest to the lowest, for all came to witness the signal defeat of the imperialist at the hands or rather the feet of the republican; but when the tables turned and the flag fell upon the Brazilian as winner, and piles of money were transferred to the opposite shore, great was the gnashing of teeth, for some time after, amongst the crest-fallen inhabitants of Concepcion.

Now as there is very little amusement to be culled in these parts, save a stray dance now and then, it is not to be wondered at that the young men, at any rate of the upper class, should occasionally let loose the bands of constraint and indulge in merry frolic; and one of these scenes, whose main elements consisted of uproar and drunkenness, took place during my visit. The affair was originated by a National Government employé, aided by one of the chief merchants of the place, and its expenses

defrayed by subscription, in fact it was a subscription merry-making, with this peculiarity that contributions were not exacted alone from the symposiasts, but equally from the spectators. A grand banquet of course occupied the first place on the programme, and after this had been noisily concluded, to the manifest weakening of many understandings, some of the more hilarious rushed out to a music shop and seized an accordion, a few dozen rockets, a great novelty, were purchased from a consignment just landed, and then rallying forth to the enlivening strains of our one-horse orchestra, each with a bottle or two in hand, of brandy, vermouth, beer or wine, we visited the respectable houses on the road, carrying off their occupants *colans colans*, when by this time, a guitar, drum and other instruments joined our band, which forthwith began to bray. Off we trotted to the Plaza where, beneath the grate palms and just in front of the venerable ruins, an immense *fandango* had been prepared, whose lumbeant flames revealed the dim outlines of the weird-like stone images as they danced and flickered in the livid glare: but as the cork flew and rockets hissed and banged, as the music drummed and squeaked, the excited guests began to dance and sing and shout so merrily, that the silver moon peeped forth from behind her mantle of thick clouds to enquire what all this tumult meant. By and by the fun grew faster and wilder more furious, and just as extra dozens of beer appeared on the scene, a general *viva* arose to welcome the cura, who visits Concepcion only once a year and happened at this

moment to be present. His reverence seemed at once at home, seated himself on the upturned sheep skin and commenced to pommel the drum ecclesiastic, as though to the manner born. His sacred garments ballooned and collapsed under the redoubled blows, his shovel hat capered in harmony, and as his example seemed to fire the rest, and no more rockets were to be had, flasks of powder and tightly corked empty bottles were recklessly thrown into the midst of the embers to aid the general din; upon which I thought it high time to retire from among the shower of exploding bombs, to learn the next morning that the frantic revellers, not satisfied with their midnight orgies in the plaza, had actually dared, as a crowning feat, to invade the sacred precincts, drag the cura from his bed, and make his reverence mount a table in his *robe de chambre* to dance a Scotch reel amongst the bottles.

My twenty days' sojourn in Concepcion had been spent chiefly in collecting, amid a climate as genial as any on the face of the globe, for although the entry into Misiones was accompanied by heavy rain, that was due merely to the temporary malevolence of those nasty grunting seals. Here there are no regularly marked wet and dry seasons, as in the other parts of the republic, yet fifteen days seldom pass without rain, winter or summer; and within the memory of man snow is believed to have fallen once, but certainly no more. North and south winds prevail, and it seldom rains when the vane points to any other quarter, but the southerly are pregnant with the heaviest discharge. In summer, if a north

wind blows for two or three successive days, a storm is sure to arise from the south, which clears and refreshes the atmosphere; when, the weathercock veers northward again and fine weather sets in for a time. In winter, if a fortnight elapses without rain, a frost may be expected to occur, but slight in comparison with what happens in Tucuman.

From the beauties and terrors of the Uruguay on the eastern side of Misiones, I turned to seek those of the Paraná, on the western, and hired a cart for £3 10s. to take me over to Itapua, a port situated on an extensive bend of the latter river and at a distance of twenty five leagues by the cart track. We started from Concepcion on the 4th of July about 2 p.m. and arrived at our destination on the 7th about midday, a quick journey enough for a bullock cart, which usually takes four or five days, but this was due to the insignificance of the weight of my luggage, the extraordinary team of eight oxen, and the activity of the owner, by whose orders we were on the move every morning three hours before sunrise. The scenery was almost identical with that on the road from Santo Tomé, undulating grass lands, with innumerable streams usually fringed with a little wood, and an occasional peep at well-wooded Sierras, looking loftier than they really are. About half way we passed near the ruins of another Jesuit town, called San Carlos, concealed as usual in the depths of a dense wood. The road was very sparsely populated, only a few ranchos were observed the whole distance, but numerous herds of cattle were devouring the rich pasture. Near

Itapua, two streams had to be crossed, which become impassable after rain and necessitate a long detour, and in the neighbourhood of these and others on the western side of Misiones, many swamps occur, differing in this respect from those on the eastern. A glimpse was then caught of the majestic Paraná and now approaching Itapua still nearer, a really fine view opened out of a large bend of this Father of Waters, its banks in parts covered with timber, in others open and clear, forming a varied and charming landscape. As we gazed up the river, a large island covered with dark verdure was disclosed, and far beyond this, the blue hills* of Misiones terminating in bold bluffs, whilst nearer, yet still in the same direction, lay the fat grass lands and rich forests of Paraguay.

A few gravel mounds here cropped up on the road before we traversed the important stream of the Saimá, and then Itapua was entered, a town which, besides its Guarani name Itapua (point of stone), is likewise called Posadas, but officially Trincheras de San José.

I was quite surprised to behold such a civilized place, comparatively so close at hand, after the rough life of the other side. Itapua is a town of some 5000 inhabitants, picturesquely situated on high land, and extending quite a mile or more upwards from the shore. Eleven years ago, it consisted of a mere encampment of a few scattered huts; six years since, the first brick house was

* These blue hills are the Sierras of Iman, which contain a large supply of leadstone, hence their name.

erected; and now there are fine and well built structures in every direction, with boarded floors, glazed windows, and roofed with tiles brought all the way from France: indeed I know of no rural town in the republic that exhibits an equally progressive tendency. A neat little plaza with its church, numerous well-furnished stores with fine large plate-glass windows, at which I was able to purchase articles unobtainable in Buenos Aires, merchants' offices, a public library and hospital, a good hotel with French cook and billiard room, schools for both sexes with two hundred scholars, the upper stratum of society dressed in the latest Paris fashions, a busy port with about twenty sailing and rowing boats, several cargo flats and three steamers, a town band and lastly a company of line troops, impressed me with a sense of the growing importance of Itapua.

One of the first sights I met with on entering the town was a dog trotting along after a cart, and a monkey riding, in the Argentine fashion, on its back and with the utmost sangfroid: a palpable illustration of the doctrine of evolution, by indicating to which ancestor man is indebted for his seat on horseback. Another display however, of a different kind, enlisted my interest, as it exhibited signs of an inventive faculty applied to dispense with human labour. In these parts, as well as in Paraguay and Brazil, corn is ground in a novel and ingenious manner. A long and strong beam, scooped out at one extremity so as to form a huge spoon with its concavity upward, and provided at

the other with a powerful vertical pestle, is poised on a fulcrum, so that the two arms are unequal in weight, the pestle end being the heavier, and in consequence, when at rest, the stamper presses against the bottom of a huge wooden mortar supported on the ground. In a direct vertical line above the distal end of the spoon, and raised from it at an insignificant height, is fixed the end of a pipe, which admits a constant flow of water. When the beam is at rest, the weight of water flowing into the spoon causes this end of the lever to descend and during its descent the liquid gradually flows out, until on reaching the ground by the momentum, not only is the hollow empty, but the stream of water now drops outside of it. This machine, which is of Brazilian invention and called *Monyolo*, is perfectly self-acting, and keeps up an alternate movement day and night without intermission, and well illustrates one half, at any rate, of the doctrine of perpetual motion.

From the town, the chief part of which is built on the flat top of a high hill, a steep descent leads to the port, and both enjoy fine fluvial scenery: a fine broad river expanse of more than two miles, directly in front, the waters of which stretch away upwards into the distance; on the opposite coast the Paraguayan town of *Villa Encarnacion* which was originally called *Itapua*, but kindly yielded up its name to its Argentine neighbour; with the white and bellying sails of the boats as they ply backwards and forwards with passengers, or the more sombre smoky steamer drags its convoy of barges

laden with horses and cattle. But at times the poor boatmen have a hard and not very remunerative occupation, for when the wind is contrary, they are obliged to row across against a stream running six miles an hour, without any increase to the usual fare of 9*d.*

Numbers of Paraguayan women come over with loads of oranges, and other fruits, tobacco, lace &c., for sale, as around Itapua exist no trees of any kind; and I was amazed at their exceedingly muscular, tall, and robust frames which, with chest thrown forward and head erect, would have delighted the heart of any drill-sergeant; the very same forms in fact that I had formerly so much admired amongst the squaws of the Mataco Indians in Oran. On the other hand, here as there, the men attain but a very moderate development, far inferior to that of the women who do all the hard work whilst their lords lead a dissipated life. Again in both sexes, especially amongst the women, great similarity of features obtains, so that it is by no means an easy matter to distinguish individuals. In Itapua there are but few Argentines, as the majority of the inhabitants is composed of Paraguayans, Spaniards, Italians, a sprinkling of French, and but two English; and the language spoken is chiefly Guarani, although of not so pure a type as in Paraguay, but Spanish is of course understood.

I found the inhabitants of Itapua exceedingly hospitable and polite; indeed their formal politeness is remarkable, although devoid of the stiffness of European etiquette; thus on arriving at a house or

encampment, where the people are at a meal, they invariably say "A buen tiempo," and when rising from the table, the custom is to bow to the host with a "Muchas gracias;" but there is one habit they, in common with all other Argentines, indulge in, and that is, ridiculing, but not ill-naturedly, the vagaries of Englishmen whom they term "locos ingleses" (mad English); a fund of most extraordinary anecdotes illustrating English eccentricity is afloat, and these they invariably air when any one of that nation is present. Whilst however I was staying in this somewhat enlightened town, the alarmed inhabitants were continually whispering together of a mysterious light that appeared almost every night in the second plaza situated on the high river banks, but where nevertheless the ground was in some parts a temporary swamp from the rains settled in the hollows. In this plaza were posted the line soldiers' barracks, and to the guard bivouacked round their fire at night, it first manifested itself, spreading something like alarm in the breasts of these warriors. My friend, lieutenant Moreillo, the officer in command, soon got to hear of it, and scenting trickery played off to frighten his valiants, issued public notice to the townsfolk, that he had given his soldiers orders to fire upon it whenever and wherever it became visible. However that it was something out of the ordinary, soon became evident. The soldiers, as they became more accustomed to the *ignis fatuus* began to style it the "plazera," the common term applied to the women who sit nightly in the other plaza to retail refresh-

ments at stalls illumined by a single dip; and singular to relate, no sooner did the light burst forth than it was heralded throughout the town by a universal chorus of howls from all the mangy curs in Itapua; so that the common expression on men's lips was "There's the plazera!"

In order to elucidate the mystery, banish dismay and restore peace to the town, Lieutenant Morcillo and myself visited the plaza for several nights in succession, accompanied by three or four soldiers with loaded rifles, and ourselves armed with revolvers. The military were stationed around the square and we awaited, from ten o'clock till twelve or one, the advent of the earthborn yet ethereal taper, in an atmosphere bathed in the brilliancy of a full moon, aided by a star resplendency unknown elsewhere than in the Southern hemisphere.

Only twice was it seen by me, but then very distinctly; the first time some little distance off, but the second, quite close. On the first occasion, the light started up from the ground with the brightness and speed of a rocket, and then descended again with equal velocity but less splendour to the earth: on the second however, we caught sight of it, as it directly but gently approached along the road, upon which running to intercept it and stumbling at every step over rough and swampy ground, we managed to arrive within three yards of the glowing vision, as it slowly glided on its subtle mission, at a level of about five feet from the earth. It presented a globular form of bluish light, so intense that we could scarcely look at it, but emitted no rays and

cast no shadows, and when about actually to grasp the incandescent nothingness, suddenly elongating into a pear shape tapering to the ground, it instantly vanished: but on looking round, up it rose again within fifty yards, but this time we could not overtake it as it bounded over a hedge, then over trees and finally disappeared in an impenetrable swamp. According to the testimony of the soldiers, on another occasion, they beheld it rise from the swamp and perch for some minutes on the top of the roof of a neighbouring rancho without walls, after which it pierced the roof and subsided in the ground beneath: but in our case there was no deception: and moreover we noticed that it never appeared on a windy night, nor after rain.

The *grife politico*, accompanied by the chief townspeople, came down on several occasions to witness the miraculous phantoms, but as in the case of precocious children or experiments at chemical lectures, great expectations were doomed to disappointment, and they boldly declared they were the victims of a hoax. After a time, familiarity breeding contempt, some of the lower orders began to play tricks, and one night we found a lighted candle stuck in the swamp, which Morellos cut in two at the second shot from his revolver at fifty paces, whereupon the guard turned out at double quick, to know the meaning of the firing.

It that solitary post and in the witching hours of night, the apparition, when first seen, was enough to unnerve any one: and although the marsh gas

theory presented itself to my unwilling mind, it would have to be strained considerably to be able to account for all the attendant circumstances.

Itapua, which was an important station during the Paraguayan war, owes much, if not all of its present importance to the Paraguayan and Misiones Yerba trade, the whole of the former of which used to centre here, as the yerba was sent down hither in the leaf to the five mills erected in Itapua to prepare it for commerce. As the Paraguayan yerbaes are not distant more than fifteen leagues from the shores of the Paraná, and the navigation downwards to Itapua has no obstruction whatever, this was its natural outlet. But last year the Paraguayans commenced to forward much of their produce down direct to Corrientes, which proved a heavy blow to Itapua, although Messrs. Uribe & Co., of the latter place still hold in Paraguay a large concession granted by that government, in which any one may cut the yerba, but must sell it to the concessionaires at a fixed price. This produce however they do not now land at their own port of Itapua, but rather at the opposite Paraguayan one of Encarnacion, in order to escape the heavy Argentine dues. Yet there is another large firm in Itapua which, acting more patriotically, does pass the Paraguayan maté through the custom house there; and besides this, a considerable quantity of the Misiones yerba trade travels in the same direction, for although a great part of the Misiones yerbaes are situated on the other side of that territory, a track has been cut through the virgin forest to transport the produce

thither on mule back to the holds of one or other of the steamers belonging to these two firms; and as the navigation of the river Paraná is almost unobstructed, whilst that of the sister stream is very much impeded, the trade of Itapua in this article must increase, especially as the Misiones yerba is decidedly finer than the Paraguayan, but is invariably called Paraguayan in commerce, much in the same way as American hams are labelled "Finest York" for foreign marts.

One evening as I was dining with the agent of Messrs. Uribi, the conversation fell upon the yet almost unexplored falls of Victoria, situated on the river Iguazú, completely unnavigable by reason of these falls and the rapids near its mouth, but which forms the limits between Brazil and the Argentine republic, and disembogues into the Paraná about ninety leagues above Itapua. He mentioned to me that it was the intention of his firm to organize a party, in about a month's time, to endeavour to reach them, upon which I expressed a great desire to be bent upon the same errand, but as I could not defer my departure homewards so long, he at once offered to give me and my taxidermist free passages to the mouth of the said river by their steamer on its way to the yerbales; and as the vessel was expected on the morrow, I at once made all haste possible to prepare for so important and dangerous an expedition.

In the first place a small sailing boat was necessary, with two experienced boatmen, and a youth as cook, all of which were engaged; then my

friend Lieutenant Morecillo provided me with a veteran of the 3rd regiment of the line ; a dog was included in the company, and last of all fifteen days' provisions had to be purchased for our party of six, afterwards increased to seven, which was well appointed, equipped with tent, catre, hammocks, apparatus, instruments, and an Argentine flag which some patriots gave us to fix on the highest point of the Falls, as well as strongly armed with three double-barrelled fowling pieces, a sporting rifle, two Remingtons, two short swords and a revolver, the latter precaution all the more necessary, as we were about to visit a territory where the Indians are credited with being very savage, if not actual cannibals.

CHAPTER LIX.

UP THE URUGUAY AND DOWN THE PARANA

CONTENTS:—The Carimá—Deep bend of the Paraná—Candelaria—Fine scenery—Paraguayan bantloos—Santa Ana—Aerial vespiary—Deer chase—Del Vasco's colony—Guaira Falls—Rapids of Corpus—A tropical tempest—Four species of Tacuará—Larva eating—Paraná—A giant tumulus—Pietri—San Lorenzo—An invasion of blue-jackets—Don Adan and his dwelling—Nimble lizards—A double row of seed-eaters—The work of a hound—Four dogs bitten by the same rattle-snake—Piapuitá—A floating Post-office—The Iguazú—The roar of the Falls—Feeling like Columbus—Farewell to the Carimá—Warping up the Iguazú—Perils and hardships—Jonah—Rapid rise of the river—Encampment—Heavily laden—Clankering—The *sacajo Tupá*—A distant view of the Falls—Discomfiture—A rocky creek—Nature's lullaby—Don Adan and his forest life—A comparison between Iguazú, Guairá and Niagara—Brazilians and their encroachments—Return—Construction of houses—Hunting—Grilled venison—Irrepressible Jonah at last shut up—Reappearance of Carimá—A stern chase—Arrival at Encarnacion.

The Carimá, the steamer charged with towing our boat 270 miles upward, carried the Argentine flag, but lay in the Paraguayan harbour of Encarnacion opposite, as her owners the Messrs. Uribe & Co., have their chief seat of business there. She receives neither passengers nor cargo, but is strictly a private craft engaged in bringing down yerba from the Paraguayan and Misiones yerbales. Built in England, she is nevertheless unfit for the navigation of the Upper Paraná, as she draws $5\frac{1}{2}$ feet of

water, although on the other hand her capacity is upwards of sixty tons and her engines of forty horse power, with a covered engine room and small cabin aft, but no berths; and the principal people on board are all Spaniards, as she belongs to a Spanish company.

As soon as everything was arranged then, in company with the agent of the steamer and the commander of the National troops, I proceeded to take my men over the river, and having seen them safely on board, once more returned to Itapua to seek expected letters. Unfortunately the post was delayed and after waiting till 10 p.m. on a very dark gusty night, with the wind right in our teeth, I determined to cross again without further loss of time, as the Carimá was to start before daybreak on the following morning. Some little difficulty was experienced in getting the boatmen together, as they were amusing themselves at the public dance which takes place every Saturday night. The water was angry and the rocks off Itapua very threatening, but by tacking three times, we shot across to our destination with the aid of a spanking breeze that laid the leeward gunwale even with the water, and dashed us with spray continually. When we arrived on board, everyone was asleep, but we soon had our boat fast astern and then awaking one of the men, a bed was quickly prepared on deck, and I heard no more till the noise of the steam heralded our departure. The whistle blew, the agent came on board to bid us good-bye, and at 5.30 a.m. on the morning of the 24th of July, 1881, the anchor was

weighed, the Paraguayan flag saluted, and our bows forthwith advanced to plough the waters of the Upper Paraná.

As there was a fine breeze blowing, the fore-sail was set, and bounding over the rocky bed of the river, wherein no sand was visible, save what had been left in patches here and there on the banks by recent floods, we soon lost sight of Itapua, the stream meanwhile fetching such a deep bend that for some distance the steamer's head pointed southward, and then a while after due north, as we sighted Candelaria, the first port passed, which lies on the Misiones bank, distant about four leagues from Itapua, and was in former times the seat of a Jesuit reduction. After passing Candelaria, the river began to contract, until in places its breadth could not exceed three or four hundred yards; and about Santa Ana, another Misiones port, the river scenery was the finest I ever witnessed, far finer indeed than anything in its twin sister's domain. The current here glides between high hills and abrupt cliffs, the former well wooded even to the water's edge, palm trees invoking attention to their beauty by peeping over the tops of the surrounding lofty forest-trees, whilst here and there thick tufts of the intensely green Tacuarí or Paraguayan bamboo, which very much resembles the fern-tree at a distance, shoot out from amongst the dense woods and nod their pretty heads at the extraordinary height of not less than fifty or more feet. Here too occur numerous bends of the river which, like dissolving views, successively merge the charming pictures one into the other.

In Santa Ana, the site of a ruined Jesuit mission, no less than fifty-four monyolos are at work, a sure indication that the population is almost entirely Brazilian, for wherever he goes the monyolo is sure to follow, and by it he can be tracked.

Hitherto we had passed but one Salto (fall), alongside an island in the vicinity of Itapua, although many corrideras (rapids) were met with; as well as several jacarés (caymans) seen, basking in the sun, either on the banks, or on floating logs; and as we were now coursing alongside a perpendicular cliff about a hundred or more feet high, we observed its surface dotted over with what appeared like white, dry gounds, but which, to my amazement, the telescope revealed to be one huge aerial vespiary, whose nests, beautifully constructed on one pattern and of equal size, hung resplendent from the rock face in infinite profusion; whatever possessed the wasps to select such a locality? except perhaps to be safe from ruthless intruders.

At 2 p.m. on the day of our departure, we were abreast of the port of San Ignacio, the most considerable town on this part of the river, where other extensive ruins of a Jesuit mission occur which, still in a fair state of preservation, are the most noteworthy of all others, although a little further up on the Paraguayan side and about two leagues from the coast exist the remains of Trinidad, and still further inland those of Jesus. Indeed the whole of this district is a veritable monumental nest of a decayed Jesuit commonwealth established hereabout for much the same reason as the poor wasps at Santa

Ana built their vespiary on the inaccessible cliff surface. Leaving San Ignacio behind and proceeding upwards, a beautiful, dark-slaty-coloured deer shot across our bows, pantingly swimming across the river from the Paraguayan side, and not more than a mile in advance appeared a canoe, containing three men and dogs, paddling furiously in the same direction, so the mystery of the poor deer's hot haste was now cleared up. Further up, the very bold scenery, to which we of late had been accustomed, abandoned us, although tolerably high lands still flanked either bank, but the view was by no means so picturesque; and as at one time we neared the shore, a large lion stood thereon gazing at us, but before we could get a shot at him, discretion seized the brute and he skulked away. Darkness now began to creep on, as we found ourselves close to Corpus, eighteen leagues from Itapua, yet another and the last of the old Jesuit ports and towns in Misiones; and here we had to pass considerable but fortunately the last rapids which, when the river is low, are rather dangerous, although there always exists in them, as in all others on the upper parts of the river, a narrow channel. The yerbales commence from about Corpus and continue up far away northward both in Paraguay and the Argentine Republic, but here only in patches and not continuous as above. In the neighbourhood of this place Señor del Vasco obtained a concession from government and established in the year 1875 a small colony, principally of Frenchmen to the number of about a hundred, but owing to mismanagement and an imprudent

selection of colonists that were completely unsuitable for the hard labour of felling forests and clearing the land for planting, the undertaking quickly collapsed and the poor colonists would have been starved had it not been for the generous assistance of the public around. Some other attempts are now being made to plant sugar in this vicinity and with excellent results so far: but in my estimation, the Paraná coast can never compete with the Uruguay with all its drawbacks to navigation, as this side is unhealthy, and Chuchu and other fevers are rife, especially when the river is low. From this point up to the magnificent falls of Guaira,* which rival Niagara, a distance of at least 300 miles, the river is exceedingly deep, in fact a vessel drawing twenty feet can navigate it with perfect safety at any state of the tide, whilst in places where the stream is constricted by high cliffs on either side, soundings even have not been found, although not long ago a Brazilian gunboat did its utmost to take them.

During the summer months especially, these banks that look so charming are nevertheless fraught with chuchu, a pest unknown here three years ago, but which made its appearance immediately after a very heavy flood, and now seems disinclined to relinquish its hold.

After having passed in safety the rapids of

* The Guaira falls, seven in number, and discharging a million tons of water per minute, are but little if at all known, as they lie in the midst of a territory inhabited by the Tupis, an exceedingly savage race of Indians: but what illimitable energy is here stored up! sufficient for the performance of the labour of the entire globe!

Corpus, we encountered the Teresa, the only other steamer that plies on these waters, but which, belonging to another yerba company, possesses only half the capacity of the Carimá; and now as darkness had completely set in, and no craft dares proceed on her voyage in these waters by night, for very deceptive are the lofty banks and deep woods, and no charts yet exist, to say nothing of the danger from floating and hidden trunks, we anchored during the nocturnal hours opposite the mouth of a small stream emptying into the Paraná, and soon afterwards beds were arranged on deck, as the confined cabin was unbearably stifling, although all the doors and windows were wide open. Towards morning however, we were roused from deep slumber by the growling restlessness of the atmosphere above, and looking up observed a storm about to burst upon us; and as tropical tempests are not in the habit of giving long or uncertain warning, scarce had the sailors secured everything, let down the lightning conductor into the water and removed our beds under cover, when the heavens began to coruscate and roar frightfully and amid the flashing din down came the flooding deluge in drops as large as marbles.

The next morning, although still wet and stormy, saw us on our way by half-past five, and we had not gone far when a large clearing was noticed, whereon a sugar plantation and the necessary buildings, one with a zinc roof, have been established by Señor Fuentes Ortiz of Buenos Aires in the midst of almost insuperable difficulties. The Paraná is

here broader than about Santa Ana, but by no means so interesting, few or any quick bends, no hills nor cliffs, so that the banks though moderately high are wanting in boldness, albeit covered with forests of the densest. All day long the scenery remained much the same, only with a narrower and straighter stream, without those inlets, turns and reaches hitherto remarked, but the coasts more elevated, more sloping and even; and as the weather cleared up and the water was as glass, we enjoyed a most delightful afternoon.

Just before sundown we let go the anchor close to the Argentine coast, where the banks are perhaps 400 yards apart, a distance apparently diminished by the fern-like Tacuaras (Bamboos), which here grow in such luxuriance; but not trusting to it alone, the ship was likewise made fast to some trees with two stout cables, and then I prepared to go on shore to have a peep into the thick forest which, even with a short and sharp sword in hand, was almost impenetrable. We landed close to a small rivulet that coursed down a deep gully between two lofty banks, and jumping on to a mound of beautifully fine and glistening sand, clambered up for some distance, then entered the dark recesses of the matted forest, and chopping away continually at the undergrowth, hewing down the lianas and thorny branches, whose spines laughed at clothing and went straight to the flesh, at last managed to reach more level ground, and then pressed forward beset on every side by such dense and pointed vegetation as scarce yielded to the onslaughts of our whetted

blade. The silence of this virgin forest was interrupted only by the chirp of the cricket, the crash of human feet amongst the deep bed of dead and rotting leaves, and the vigour of the sword cuts, when we suddenly came upon an old Indian track, as evidenced by the severed lianas, and sundry marks only discernible by an old trapper's eye; further on, and athwart our path ran the well-beaten tracks of tapirs, one of which was evidently recent, and led us to the creek near which we landed; this we crossed, and as it was now almost dark, hastened to cut our way back to the Paraná, full of regrets at the want of the trappers' trained dogs of the district, by whose aid we might easily have shot several specimens of the "Gran Bestia."

The whole of these interminable forests are dotted with Tacuaras (Bamboos) down to the water's edge, and the majority of those found here are gifted with a large number of severely-wounding thorns at every knot, which oppose very formidable obstacles to those attempting to penetrate the compact jungle. Four species are indigenous to this region; the *Tacuara guazú*, the largest kind, has spines of a very threatening character, reaches the height of fifty feet, and inhabits the dense forests in clusters; the *Tacuara gatabó*, reaching a lesser altitude, has very small thorns in the same position, and grows at intervals throughout the forests; the *Tacuara tacuapi*, of smaller growth still, is entirely devoid of spines, but when the cane ripens, which it does in seven years, in each section between the knots is found a single caterpillar, called in Gua-

raní, Tambú, whose chrysalis develops into a dusky-hued moth; this larva is esteemed a *bonne-bouche* eagerly sought both by natives and Indians, and when fried makes a very delicate-flavoured, but somewhat oily dish: lastly the *Tacuarembó*, the smallest of the species, from which the Indians manufacture their arrow shafts. Indians, however, are now exceedingly rare in this part, in fact near the coast on the Argentine side, they may be said to be almost extinct, although a few leagues inland on the opposite Paraguayan shore, they are still found.

Next morning broke wet and heavy, and as the moon changed the night before to new, we fully anticipated a rainy month, nevertheless the anchor was weighed by daybreak and off we went once more, the river banks becoming gradually bolder and more picturesque again, whilst on the shore were several wild animals disporting, whose forms, with the exception of the deer and monkeys, I could not distinguish. During breakfast, the mouth of the Paranai was passed, a stream that joins the Paraná on the left bank, and ranges third in size among the very numerous affluents that disembogue into the main stream between Itapua and the falls of Guaira; the second being the Pirai, and the largest the Iguazú, our destination. Some distance above this point, a large, somewhat flattened, dome-shaped island, called Caraguaitai, rose like a giant tumulus out of the waters to the height of 200 feet, the loftiest island on the Alto Paraná, and well-wooded to its rounded summit on which a very

fine natural grotto exists, but the natives fear to land on its shore, as it abounds in venomous snakes.

Towards the afternoon, as the weather brightened and it became very hot, I set my men to work to get all in readiness for our expedition; to clean the arms, knives, swords, mend sails, and make fishing and sounding lines &c.; for in this climate everything made of iron or steel cannot be kept free from rust, notwithstanding the application of oceans of oils or fats.

About 3 p.m. we arrived at a place called Pirai, where there is a so-called Port, but on the Alto Paraná, such a title only signifies a track cut from the water's edge some little distance into the forest, with perhaps a rancho or two peeping from amid the lofty stems. Here we had to pull up in order to embark three boat loads of maize which were bound to the Messrs. Uribi's yerbales for the use of the labourers.

The lonely beauty of the scenery in this part; the pure and placid but swiftly running stream; the very lofty banks clothed as before with eternal timber, and from which wild rocks protruded at intervals; and the knowledge that the foot of civilization had never yet invaded those primeval recesses; filled me with interest.

In front and on the opposite coast lay the Paraguayan port of San Lorenzo, consisting of a few huts and a solitary boat or two; but we had barely cast anchor, and lashed the steamer by hawsers to the trees on shore, a precaution necessary on account of the impetuosity of the current, before

a large canoe, rowed by four sailors in blue jackets and red Basque caps, with the Paraguayan flag floating from the stern, boarded us from over the water, and introduced to our deck the Inspector of the Paraguayan yerbales. From this said Paraguayan port of San Lorenzo, a large quantity of maté is shipped down the river, as the yerbales are within three or four leagues of the coast. I now warped my boat alongside and went ashore at Pirai, but although only so short a distance, the labour to fetch it was excessive, owing to the swiftness of the stream; after which, clambering up the steep, rough and lofty hill side, under a broiling sun, entailed such further toil that we arrived at the summit completely breathless and perspiring in streams: nevertheless, even in this state, the charming view did not escape our observation. Here we visited the adjacent rancho of our fellow passenger, an Italian named Don Adan, who has lived six years in these solitudes, and ended by becoming a first-rate trapper, forester and explorer, a man who, perfectly well acquainted with all Indian tactics, has fearlessly dived into parts hidden even from the light of heaven for centuries, and into which the foot of the white man has never dared, and has now settled down here to work on yerbales not far distant and devote himself to any commercial undertakings that may fall in his way.

As we were approaching his dwelling, I was amused to watch the crowds of lizards scampering up and down every long post that served to support the roof, which suddenly pausing in the glaring

sun, raised their pretty heads erect to enquire the reason of our intrusion: I tried to catch one or two and even to strike them with my stick, but they were too transcendently quick, passing like lightning beneath the thatched roof. Attached to the residence is a large maize plantation, as well as one of sugar cane, cleared with immense labour from the primordial forest, and alongside a pretty little natural cascade with a fall of thirty or forty feet amid the densest verdure of grass, moss, ferns, palms and bananas, backed up in the immediate foreground with lofty and dense stems, from which the little paradise had been wrested. Butterflies of brilliant hues, parrots screeching in the forest, toucans flying overhead, and swarms of buzzing mosquitos, with a blazing luminary in the heavens, scarcely spoke of winter, and yet such was the season.

The house itself, if such a structure may be so dignified, was constructed altogether of different species of Tacuara, the canes being placed side by side, with chinks that allowed the air to circulate freely within, but no earth nor mud was employed for the walls, which would be out of place in the tropics; the roof was of thatch, and inside were high shelves of the same cane to serve as sleeping bunks. One partition only, likewise of canes, was designed to separate the kitchen from the only remaining apartment that availed equally for dining room and dormitory.

To my invitation to accompany us, Don Adan yielded a ready assent, as he was waiting for a sail-

ing boat of his, which was on its way up and very likely would be detained another ten days. As he already knew something of the Iguazú and was very expert in woodcraft and hardy and adventurous besides, I considered him a great acquisition to our party: and moreover by his presence our battery was increased by another gun, so that we could now deliver sixteen shots without reloading.

We soon had the maize shipped, and then as it was just dark, sat down to dinner, after which, some of the crew, and the peons en route for the yerbales, were allowed to go on shore and cut sugar cane from Don Adan's plantation. They hesitated not to accept the double permission and soon returned with a boat-load of the gramineous saccharifer, and in the flickering light of the ship lamps, nothing was now to be seen on board but a row of men down each side of the deck, seated and busy with a long cane in one hand, a knife in the other, all hard at work munching the sweet and juicy morsel.

Next morning we started at the customary hour and after passing a solitary rancho or two on the coast, by and by noticed just a slight smoke, something like haze, hanging over the trees, and here we stopped by keeping the engines moving at sufficient speed to overcome the downward current, whilst Don Adan disembarked with three men in the steamer's canoe, in order to fetch a dog of his that some foresters were keeping for him, and without which he never roams the forest. These swift and powerful dogs are bred up solely to the work of the chase, and the one he brought on board could

not be purchased from its master for a hundred arrobas (more than a ton) of pounded yerba, as he is so very accomplished and active, and skilful enough to provide twenty men continuously with food. It would be difficult indeed to assign any breed to such mongrels, but the greyhound form predominates, whilst both scent and sight are very keen. Relying entirely upon his trusty friend to find game, Don Adan would go anywhere with this hound, without food, carrying only a gun, ammunition and knapsack, and a short broad sword wherewith to chop his way through the dense, jungly, ramous forest. Once his dog was out hunting with three others and all four were bitten by the same rattle snake, which they however killed; but the two, first bitten, died on the spot, whilst the remaining two, although very bad for a time, ultimately survived.

Beginning early in the evening, it rained all that night heavily, and continued till the midday following, but that did not hinder us from continuing the voyage at daybreak; so sighting betimes the mouth of the River Pirai (In Guaraní, Fish river), again a tributary on the left bank, we shot further up the stream, where the Paraná now became very narrow in places, and in consequence more beautiful, especially in the neighbourhood of a small but lofty island called Pareja, and not far beyond which the river, again gorged, is so deep that sounding fails. This afternoon we remarked some Indians fishing from a canoe off the Paraguayan coast, and further up on the same coast,

passed the mouth of the Ñacundai, obtaining a glimpse of a fine cascade which falls into its bosom from a height of thirty or forty feet.

Again at sunset we anchored in the midst of a soaking rain which continued all night; and next morning, much to our disgust, it gave no signs of abatement; and as on that night we fully expected to reach the mouth of the Igauzú, and have to enter an open boat, the prospect was not pleasant. About 9 a.m., on arrival at the port of Pirapuitá in Paraguay, perhaps a dozen ranchos were observed stretched along the hill side, with a small forest clearing around each; a league or so inland lies the Indian town of Villa Azara, whose inhabitants belong to the Guayarras tribe of the Guaraní family; and here it was that the naturalist Azara lived for some time, and like Alexander ennobled the spot for ever. Directly opposite Pirapuitá, on the Misiones side, two or three settlers have fixed their slight habitations at a port called Meabe; but really the ultra-solitariness of the region remains almost more accentuated by an occasional view of these scattered lonely dwellings, as well as by the casual meeting of Indians, as we did two this afternoon, on their journey downwards in a canoe close to the right bank. Then sailing swiftly onward amid loftier and bolder coast scenery, we passed the last ranchos, situated at a port called Truguazú on the Paraguayan shore: here we just slackened speed for a few minutes to drop overboard a sealed bottle containing letters, which a canoe issuing from the shore picked up as we steamed away.

At 5 p.m., the heavens yet distilling, we arrived at the mouth of the Iguazú, and entering well within the bar, anchored in seventy-two feet of water, on the bosom of a noble tributary quite 200 yards broad, flanked on both sides by elevated, forest-laden banks, in which the Tacuara tufts were visible as usual, with a transporting view in front of thickly wooded, lofty and bold promontories. As soon as ever the anchor reached its profound and rocky bed, the whistle blew a prolonged and shrieky blast as a salute to the river deity, whose protection we now sought, on invading her as yet almost unexplored territory. For the boom of the falls we listened and heard but indistinctly their dreadful roar which, in calm weather, can be distinguished even lower down. During five days had we been cooped up in the tiny Carimá, awaiting the moment that had at last arrived, and we retired to rest that night with much the same feelings as Columbus on the eve of the very eventful day, when he sighted the land of the new world. Next morning, although cloudy and heavy and somewhat cold, broke to our satisfaction free from rain, as a pampero evidently presided over the higher atmospheric regions; so by 6 a.m. we were all on board the boat, seven persons and two dogs, and everything was found in excellent trim. As we sheered off, we gave the Carimá three cheers, dipping meanwhile the Argentine flag destined to float from the highest point of the falls, a salute returned from her vapour-laden throat, accompanied by the lowering of the ship's bunting; and so we left the steamer to pursue her

journey six leagues higher up on the Paraná, where lie the yerbales, on which as many as 600 men are employed. As we toiled up against the stream, we caught a last sight of our late home, as she turned the point to reenter the Paraná, and just as she was disappearing gave her a farewell salvo from our fire-arms; a puff of white cloud appeared for a moment above her deck, the heavy air brought as a messenger the acknowledgment, and then we set to work in earnest with a heavy sailing boat and only two oars to battle with the rapid current of the Iguazú.

The river, which was higher than usual, remained more or less of the same uniform breadth, but made a good many turns, with banks about a hundred feet high, sloping and timber clothed, laved by the white threads of an infinity of cascades, and whose stems gave a clear indication of a high water mark exceeding the present level by at least thirty feet; in places, to diversify the landscape, rock masses peeped out from among the vivid verdure, timidly at first, but afterwards, boldly jutting their menacing reefs into the stream; and here a carpincho, in his gambols, presented himself only to dive apprehensive of the shot that was instantly levelled at him. At 10 a.m. we halted for breakfast on a rocky promontory, having accomplished only a little less than four miles in the like number of hours; the two corrideras we had already passed, were not troublesome owing to the swollen tide, but still in places hardly any headway could be gained with only two oars. Whilst we were munching our salt beef, a school of six seals shot by going down the

stream; and after a rest of two hours we again embarked, and now the labour became yet more severe, as the river was running at a tremendous rate; so abandoning the mid stream, where we could not advance a step, we proceeded to creep cautiously along the shore which was strewn thickly with rocks above and below the surface. Among the narrow and tortuous channels around these frowning boulders, the stream poured like a mill-race, from which besides the labouring oars, and the aid of a warping rope attached on shore, a man stood with a long pole to keep us clear; yet with all our efforts, the boat forged ahead but very slowly. The banks now resolved into bolder and loftier piles, with finer waterfalls, the majority of which however due to recent rains, although not permanent, added exceeding interest to the landscape. As we sat deep in the water, and the river was evidently rising fast, and covering the majority of the reefs by its flood; and as with the rise of the tide and closer approximation to the falls, the stream increased not alone in violence but in the multitude of its eddies, our peril was much enhanced. All but three of our company were now on shore hauling with all their might, whilst we on board, discarding the oars as useless, employed long poles of the Tacuara, whose aid was somewhat equivocal, as notwithstanding their strength they frequently broke at the critical moment. At one spot, as we were working round a huge jutting boulder with infinite labour, the current suddenly twisted us about like a cork, and landed us with a tremendous crash broadside on to a

ledge of completely immersed rocks, on which we instantly began to heel over, and became for a time perfectly helpless and half stupified; and as I expected every moment to be pitched head foremost into the seething cauldron, I divested myself instantly of arms and clothing: but by superhuman efforts, the boat was at length righted and the source of danger passed, but it was bump and scrape every second upon the sunken reefs. To make matters worse, we had on board a Jonah, in the shape of Italian, the owner of the boat, who was for ever troubling us with his lamentations and cries, a lubber who did nothing himself and was perpetually hindering the efforts of others, so that I felt at times strongly inclined to launch him, like his prototype, into the deep; the weather too was bad, raining and hazy the whole afternoon; yet in spite of all adverse circumstances we managed to accomplish about a league and then at dark happening upon a rocky cove, we thrust into its welcome shelter and fixed up the sail as awning for the night. Two hours were consumed in lighting a fire, as the fuel was sopping, and then a morsel of awfully salt charqui, with a biscuit and glass of wine, sufficed for dinner, when having secured the boat, we all turned in under cover. During the still hours of the night, the boom of the distant falls was quite distinct, as it differed completely from the dash and splash of the neighbouring cataracts and breakers.

Next morning July the 30th, we rose at day-break, and found that the river, which had risen more than six feet during the night, and was rush-

ing with frightful velocity and dashing over the reefs in sheets of foam, threatened instant destruction to any craft that ventured upon its agitated bosom; nevertheless we put off early, but in spite of our utmost exertions for some hours, only a hundred yards or so were gained, and at last we were obliged to give it up, retiring into a small smooth bay lined with sand banks, and here we determined to form our encampment, as no power on earth could have forced our boat up higher. This point was but three leagues from the mouth of the Iguazú, and about a league from the falls, where the banks were still loftier than before and completely precipitous and rocky, but compactly covered with dense forest extending away interminably into the interior, with continuous high waterfalls every few yards; whilst the river bed was one mass of black frowning boulders between and over which the headlong giddy current glided, foamed and roared, forming never-ending whirlpools: a bold and delightful scene to the lovers of the picturesque, and stamped with the solitude of ages.

We soon landed and all hands, after fastening the boat, set to work to make a platform on the steep sand bank, about twenty feet above the level of the water, on which to erect the tent, and after an hour's work with stones and sand it was completed, and the canvas stretched; but as it had now cleared up, the things were put out to dry, an arm-rack arose in front of the tent, and then all being in readiness, breakfast was laid out about midday, during which, two seals were observed passing down

the stream at a terrific rate. The river continued to rise, so much so that in the afternoon we noticed it had encroached fully a yard since our arrival. Don Adan went out in the morning with his dog and sword, and on his return reported the forest very dense and impenetrable, and moreover soaked to saturation with the late rains, and declared that in his opinion, it would be impossible to force our way through it to the neighbourhood of the falls; to which judgment of the old tracker we gave sorrowful heed. His dog got on to the scent of a deer, which it chased to the water, wherein the frightened stag plunged about a hundred yards from our encampment; I just caught sight of it as it arrived abreast, dashing down the midstream foam at a furious rate and took a flying shot at it with my Remington; the ball passed within two inches of its head, when it immediately dived and I saw it no more.

As soon as the following morning dawned we were up and exceedingly busy preparing for the dreadful clamber to the falls. Six of us started on this expedition; Don Adan Lucchesi, the soldier, my servant, the head boatman, the youth, and myself, leaving one man, with loaded arms and food, to take care of the boat: and all of us were heavily armed, besides carrying bedding and provisions for three days. My load consisted of a carbine, belt, cartouche box with thirty rounds, heavy knife, revolver and cartridges, a couple of heavy blankets, a bag containing fifteen pounds of biscuit, a bottle of spirits and some instruments, weighing altogether

certainly fifty pounds at least; and the others were similarly burdened. Besides arms we were provided with a heavy hatchet, and three machetes (short broadswords) for the purpose of chopping a track through the forest, and Don Adan's dog, of course, was a conspicuous member of the party, as we hoped by his aid to obtain fresh meat.

At nine a.m., starting in Indian file on our very arduous task, we took to the river's edge, as the forest above would have demanded many days' toil at least, if we ever reached the falls by that route; and climbing along the muddy and slippery bank inclined almost perpendicularly to the water, and from which rose on our immediate right the overhanging precipice, we floundered along with bodies bent away from the raging current, every footstep sinking deeply into the mire, and clutching each blade of grass or twig, to save us from a headlong tumble into the boiling cauldron, scarce removed a foot from our insecure path. After having advanced about a hundred yards thus, we proceeded to climb the nearly upright face of the cliff, in order to reach the forest, Don Adan leading, and the soldier bringing up the rear with fixed bayonet. Indians, however, for whose benefit all our warlike preparations were undertaken, are rarely seen on the Argentine side, and those we did see did not appear so savage as our imagination painted them, perhaps we were too numerous and too well armed; but on the Brazilian coast immediately in front, the exceedingly savage Tupis range the forest, though they are seldom met with below the falls of Iguazú.

Mounting slowly the jungly precipice, we chopped our way through the densely prolific and strong creeping plants which, tripping us up continually and then closing upon our persons behind with their powerful thorny clasp, led us at times to imagine ourselves held fast in the grip of some fierce savage. We now turned to traverse the lofty overhanging edge of an inlet, and had much difficulty in passing round it, as the slippery clay, the hidden roots of trees and the multitudes of creepers threatened to precipitate us every instant into the yawning gulf below; then descending into the rocky bed of a stream that falls into the river, we had to climb very carefully over the immense boulders, handing up the arms one to another as we proceeded. Now again ascending, we forced a path through very thick arboreal growth towards the river bank which, slippery in the extreme, but covered in tufts with Indian grass, facilitated somewhat the descent at the expense of our fingers, that were cut through almost to the bone as we clutched its sword-like edges to prevent a headlong plunge into the torrent beneath. Again further on we had to seek a yet lower level, through a very compact stretch of wiry weeds about two feet high, which almost hindered further progress, especially as, hidden beneath their thick foliage were fragments of boulders, loose stones and yawning fissures that caused us to stumble, roll and fall in an alarming manner: then descending again to the edge of the river, we now passed along a sort of shelving rocky bank, working at a strong incline, in a series of short steps, right

down into the foam, but covered here and there with tufts of grass and patches, the whole yielding a footing as uncertain as ice, on account of the rills that trickled over its surface from the precipice above. Along this we could proceed in no other way but on all fours, as otherwise, not being able to stand upon it, it would have been impossible to avoid being pitched into the surge below, and even then many times, in order to avoid a plunge which, irrespective of any swimming power, would have been fatal, we had to throw ourselves full length upon the smooth and wet surface. But the most arduous as well as perilous part of the clamber was in effecting a passage over or round the boulders and loose rocks on the edge of the shore, and this was our principal toil. Here very many serious falls were experienced, as we jumped from one sharp, slippery edge to another over a seething cauldron; then working round some insurmountable giant rock, we had to tread on loose fragments, clinging all the while, heavily laden as we were, with both hands to the smooth face of the mass to prevent being precipitated by the dislodgment or tilting of our momentary stand-point; again, climbing over the huge broken reefs, where chasms and clefts opened suddenly beneath our feet, to reveal boiling, threatening surf; or, grasping overhanging branches and swinging from one dangerous ledge to another, tripping, sliding, falling, through gorges and over rocks, wet through with foam and spray from the terrific cataract, hungry and exhausted, every few yards our weary bodies had to rest, otherwise we should have

been unable to continue. Of course, had the current been low, instead of high as it was, the difficulty of reaching the falls along the edge would have been diminished; nevertheless as it was, we advanced onwards feebly to the goal, whose boom was now exchanged for a loud roar which, like that of the lion in the forest, silenced all other lesser water-notes; the river banks began to close in more, the faces becoming altogether precipitous and more lofty, and the river yet more violent.

At last on turning a bend, we unexpectedly obtained a distant view of a part of these celebrated cataracts which, even at the distance of a mile afforded a magnificent sight that inspired us with fresh exertion; but little of the main falls was seen, only an immense white cloud of spray that covered the whole as a pall, served to indicate their position. They appear indeed to consist, un-like those of Guaira, of one vast curve, lying not directly transverse to the river but inclined to its banks, and intercepted, near the Argentine shore by an island. We at once pushed on and reaching within half a mile of our destination, found that it was no longer possible to approach the falls directly from the front, as the vertical cliff now rose directly out of the boisterous surf, and so all means of further advance was cut off on account of the great flood. Don Adan then proceeded to cut ledges up the face of the precipice, a work of great labour, and having gained the top, found that all access was denied in that direction likewise, by a new and tremendous fall due to the late rains; so that to realize the

coveted object was no longer deemed feasible, unless indeed by retracing our steps, ascending the scarped heights, and cutting a way through the forest by a long detour, involving some days' toil, we were prepared to risk starvation, as well ourselves, as the poor boatman left in charge: so that I was very unwillingly compelled to renounce all hopes of planting the Argentine flag upon the very top of the falls and had to remain satisfied with the distant glimpse which, under the circumstances, I was fortunate in obtaining. These falls are in fact perfectly unapproachable otherwise than by land, and even then the labour of reaching them would be such as to tax most men's power of endurance to the utmost.

It was now late in the afternoon, and although the air was warm, and we had perspired so inordinately that our clothes were sopping, nevertheless the clouds of spray that drove down upon us from the falls, produced great chilliness. Sheltering under the lofty cliff, around whose dark, sharp edge above, festooned with creeping plants, magnificent ferns and moss, bright humming birds were flitting, we attempted to seat ourselves upon the top of the shelving terrace-like slippery rocks leading straight into the foaming breakers, and which were covered with tufts of grass springing from the crevices, and pools of water ever distilling from the banks above. And as we sat in the dark evening air brooding over our discomfiture, rain began to threaten, so collecting a few twigs and a little dank and coarse grass, a fire was essayed to cook our saline charqui, but it

was a failure and refusing the half raw meat, I fared on a little biscuit and then set out to choose my bed. A slab of rock was selected, about three feet by five, on which the water did not descend, although all around was subject to continual splashing, and after having changed my clothes, spread a waterproof sheet below, and rigged up my mackintosh above to keep off the penetrating Scotch mist from the falls, I rolled in the two blankets and lay down to rest; and not all the *posse-comitalus* of anthypnotics, natural and artificial, not even the knowledge that a turn over in the night, or a nightmare which the surrounding circumstances were calculated to induce, would be fatal, were able to counteract Nature's lullaby, in the rush of foaming waters around my rocky cradle, the dull roar of the adjacent cataracts, the gentler ripple of the descending rills on every side, or the frowning yet protective heights whose dim outline could just be discerned in the starry vault above.

Don Adan Lucchesi, with a single companion, once made a six months' expedition through the Misiones forests up in this direction, and succeeded in reaching the edge of the great falls of Iguazú which, heaviest towards the Brazilian shore, are really magnificent and quite rival or exceed Niagará both in height and volume. They lie as these at Niagará, and in fact every large cataract must, in the form of a horseshoe, which is upwards of a thousand yards in circuit, and precipitate their wondrous, glittering, aqueous discharge to the depth of 150 feet; but according to the report of a well-

equipped Brazilian expedition, sent up the Iguazú on purpose, some years ago, to 174; whilst an engineer, who subsequently visited them and measured them with instruments, allowed them an altitude of 180 feet; thus, in either case eclipsing Niagará which has a vertical fall of only 144 feet; and as the Guairá falls exceed by far those of Iguazú, European geographers will scarcely be prepared to hear that the Paraná, besides an infinity of lesser yet considerable falls, possesses two, both superior, in picturesqueness as in grandeur, to the hitherto North-American non-pareil.

When the river is flooded, the volume of water passing the Iguazú falls is simply enormous, but the best time for viewing this noble cataract is in its normal state, when the descending parabola is as clear as glass. Above the falls however, the river is completely unexplored, as savages hold entire possession of it: but according to Indian accounts, it widens out considerably, contains a number of islands, and is navigable for forty leagues almost to its head waters in Brazilian territory, and that some distance above the Iguazú falls, there occurs a natural bridge of rocks which completely spans it.

In Don Adam's expedition into the deep and hitherto untrodden recesses of Misiones, after passing the hills, he found, about fifteen leagues inland from the Iguazú, and commencing on a high plateau near Campo Eré, extensive pine forests which evidently continued a long way into Brazil. He and his companion had only their guns, ammunition, machetes, blankets and two good dogs, and after

opening a track for many days, chanced unexpectedly upon a small village called Palmas which, although on Argentine soil, was entirely populated by Brazilians, who have a knack of encroaching, and in fact, both here and at Campo Eré, have established their own authorities. At Palmas they were at first fêted, but afterwards imprisoned, as a report was spread that they were Argentine spies employed by government; so they had great difficulty in obtaining their release which, after some time, was granted, on the conditions of their signing a declaration and quitting the territory. Far different however is it with the Indians, who have a habit of closing any track leading to their tolderias in the forests, by bending down canes and branches across the path, so that they can hear the approach of man or any animal: in the former case they immediately take to the recesses and on arrival the traveller finds the village deserted. During their residence in the forest, they experienced no difficulty in obtaining food; in fact, aided by the dogs, more than fifty antas (tapirs) fell to their guns which, with the abundance of wild honey and the tender top leaves of a certain palm eaten with it, more than satisfied all their wants.

Here under the falls and indeed all along the river Iguazú, although the air was laden with spray, we suffered very much from the attacks of immense numbers of a species of gadfly, for more tormenting than any mosquito; their bite produced an ugly spot with a small red nucleus: but to atone for the torture caused by one ugly insect, pleasure was

tasted when two or three swings of the net landed me several specimens of that curious, beautiful and rare butterfly a *Catagramma*, which bears on the posterior wings distinct numbers, as though its Maker intended it for some particular work, classified it and rendered its responsible. It needed but the first streak of dawn to arouse us from our rocky beds, and as our occupation was now gone, I proceeded to plant the Argentine flag above extreme high water mark, fixing a board at the foot on which were painted my name and the date; then saluting it with a salvo of our artillery, we made instant preparations for the return journey, as the weather betokened rain, and in that case, the rocks would become so slippery that we should be debarred, without undue haste, from reaching the encampment that day. We now turned once more and took a last farewell glance at the falls which had entailed such fruitless labour upon us, and then struggled forward to work our way back to the boat which, after many hardships and dangers, we safely reached in the afternoon. After dinner we determined to pack up and depart at once; so dismantling the tent and embarking our chattels, we were soon bowling down the stream at a speed very different from the ascensional; but yet the navigation was by no means easy, on account of the numerous rapids and whirlpools, which latter spun the boat round and round, and without very great exertions would have dashed it to atoms against the projecting reefs: we noticed logs of wood as they entered the vortices, which were sucked down never to reappear to our

eyes. At last we entered the majestic Paraná and breathed freely again; but as there was no wind, the sail was not set, nor indeed was it needed, as the current bore us forward and downward very nimbly. Close here on the Paraguayan shore occur other extensive falls called Mondubí, about a league up the tributary Acaray, but they are not to be compared with those of the Iguazú; in fact the whole region is sown with cataracts.

About an hour before dark we arrived at the Paraguayan port of Goycocheas where three brothers of that name reside and are engaged in the yerba trade, as the yerbales lie some twenty leagues inland. They possess a small steamer the Teresa, having an English engineer on board, before mentioned as employed in transporting maté to the markets below, besides lighters, and indeed have embarked considerable capital in the venture, but still without the results anticipated, as they, in common with many Argentine refugees who line the coasts of Paraguay, complain bitterly of excessive taxation on the part of the Paraguayan government, so that now Misiones is federalised, there will be a hégira of merchants with their capital to the Argentine shore.

The little port lies on an insignificant stream, whose banks, lined with a fine, firm, yellow sand, offer every facility for disembarcation, and after ascending half way up a considerable hill, the village is encountered on a small plateau, cleared from the impenetrable forest, and consists of about a dozen ranchos, amongst which is conspicuous the

large building, with a store attached, that serves as head quarters of the Goycocheas. The adjoining store did not surprise me, as I was well aware of the custom of employers in these parts to pay for labour in goods.

The houses are here constructed very lightly, in fact the roof is the only essential part, the walls being formed of Tacuara laths, between whose crevices the air courses conveniently. A whole cane is taken, of the thickness of a man's arm, and split and resplit longitudinally from the interior but only so deep as to leave the exterior silicious covering adherent, until the whole circumference is opened out laterally, and this then erected perpendicularly, forms as it were a plank of the wall and saves the canes in the proportion of the circumference to the diameter. This bamboo is indeed put to numerous domestic and other uses; for instance, at the yerbales in the interior of the dreadfully dense forests, as they do not possess maté bowls nor bombillas (sucking tubes), they make pots of the silicated cane wherein to boil the water, and moreover maté-bowls of the same material, as likewise tubes of the smaller species; whilst for the strainer at the end, the fibre of a very fine liana, the Guayanté, is employed and furnishes a finer mesh than the thinnest wire.

At the residence of the Goycocheas, we were very hospitably entertained, and a hunt was proposed for the morrow, but unfortunately the day turned out wet, and we had to forego the pleasure. These hunts are conducted with the aid of dogs

trained for the purpose, and a spot is selected where numerous tracks, especially recent ones, lead to the stream, on which the dogs are put and soon surprise the animal in its lair, whither if the quarry be a puma or jaguar, as soon as the hounds give tongue, it is followed with guns, and shot, at times a very dangerous sport ; but if a deer or Anta (Tapir), the Gran Bestia of the Spaniards, or the Borebí of the Guaranis, they immediately make a rush helter skelter, crashing through the forest, and take to the water. A canoe is in readiness which immediately pursues them, and on approaching the dusky form of the Tapir, the bow oar dropping his paddle, seizes a short and sharp harpoon, fastened into a cane, with a line attached; this is poised and launched, transfixing the Gran Bestia, which is then easily secured; if however an attempt be made to shoot the game, the carcase is frequently carried away by the currents and lost: the Indian method for all large animals, on the contrary, is principally that of pit-traps.

We now bade adieu to our hospitable entertainers and hastened down stream, stopping to breakfast at a small port on the Argentine coast, containing but two ranchos, whence they ship maté, as the yerbales are only three leagues off, and therefore much closer to the river than those on the Paraguayan side. They gave us a very good meal, the principal dish of which was grilled venison, and most deliciously tender, close fleshed and sappy it was, and completely devoid of that strong flavour so objectionable in the more southern parts of the

republic. The very unusual sight of fresh peccary skins was here presented to us; for although these animals exist in extraordinary abundance in these parts, the hunter fights shy of them, as they are remarkably fierce, and kill many valuable dogs with their lancet-like tusks. In the midst of breakfast, the boy came up to report that the irrepressible Jonah refused his rations and demanded better, although he fared exactly as myself, and very much better than ordinarily; to which I replied that he might leave his food if he pleased, and gave orders to the soldier and my servant to prepare their breakfast without him. After the morning repast, we again embarked, the head boatman grumbling insolently the whole way, until my forefinger itched for the revolver trigger. Early in the afternoon, once more gaining the port of Pirapuitá, close to Villa Azara, I determined to land there, and visit a friend, a Paraguayan, who came up with us in the Carimá, and who introduced me to pretty well all the people in the place, and just as we had finished the round of calls, a messenger once more arrived from the boat on the same errand as before, impertinently demanding superior provisions on the part of Jonah, who ought to have been in the whale's belly long ago. Out of patience I left my friend and proceeded to the landing place where I enquired what the fellow meant; he saucily replied that I had no right to better food than they, alluding to my landing occasionally and obtaining a good breakfast or dinner, and then mutinously threatened to go off with the boat and leave me in the lurch; upon

which I told him that in such a case I should give the soldier orders to fire upon him, and that if he said any more, I would at once take him prisoner; for anything like mutiny is very quickly suppressed in these distant parts. This is another instance of the annoyance that explorers have to suffer from impudent and incompetent service in the sequestered districts of the republic, and which rises to such a point at times, that travelling is almost impossible.

As I was dining with my Paraguayan host, what should we observe but the Carimá steaming swiftly round the point close by on her way downwards; we ran out and hailed her and she responded with a cheer, whereupon in an excess of politeness I raised my cap, an act which cost me dear, for as I afterwards learned it was received on board as a signal to proceed; so as it was not yet dark, the steamer pursued her way to her anchorage some leagues below. My determination was at once taken to start in pursuit, and as soon as dinner was finished we forthwith embarked in the dusk on the chase. For four leagues we went as fast as oars and current could impel us, keeping an intent lookout for the steamer's lights; when all at once, one was observed and we made for it, but could distinguish no hull, and as we were fast driving on shore, suspicion crept over us, and we soon found out that it arose from an Indian encampment, which we hailed in Spanish and Guarani, without evoking a reply, in fact we observed the dusky skins gliding behind the trees, so we gave the *ignis fatuus* a wide berth as promptly as possible. After rowing about

half an hour more, the Carimá's lights were perceived as she lay snugly at anchor close to the shore, but our approach was not discovered until we were almost on board. The captain was delighted to welcome me, and as they were at dinner, I was nothing loath to join them and spin yarns of our adventures. On her way down the steamer had whistled at the mouth of the Iguazú, in hopes of hearing or seeing something of us, and when they passed us at Pirapuita, mistook for a signal to advance what was only a piece of courtesy. After dinner my traps were transferred to the hold of the Carimá; surly, mutinous, and cowardly Jonah was paid and dismissed with three days' provisions, and I trod the deck once more a free man, attended only by the faithful soldier, my own servant, and Don Adan.

Next morning we set off by daybreak and darted downwards at a fine rate, anchoring as usual at night; and the subsequent day, in spite of an early fog which delayed our starting for three hours, arrived by 1 p.m. at Villa Encarnacion, in front of Itapua: so the steamer had accomplished the distance from the yerbales, six leagues above Iguazú, to Encarnacion in forty-eight hours, instead of five days, as on the upward trip.

CHAPTER LX.

UP THE URUGUAY AND DOWN THE PARANÁ

CONTENTS:—Departure from Itapua by boat—A double challenge—The maté nuisance—Cries distressing and joyous—Heavy seas—Bird life—Rapids with double reefs—Laguna Ibera—A hunt after a Port-captain—The tiny steamer Correntino—Guaraní chatter—Ituzaingo—A start for Corrientes—The mouth of the Paraguay—A new right bank—The city of Corrientes—The hotel Hispano-Americano—Covent Garden—The Governor—Dornice—Watching the Indians—A solitary Englishman—The Taraguy—Departure from Corrientes—A floating menagerie—An accomplished sheep—Los siete corrientes—Bella Vista—Goya—Colony of San Gerónimo—On the look out for a shipwrecked crew—Esquina—Low coasts—The Alexandra colony—Difficulties of the navigation—La Paz—Gran Chaco colonies—City of Paraná—Solid port works—City of Santa Fé—Diamante—Colony of Corondá—San Lorenzo—Rosario—Arrival in Buenos Aires.

On crossing over to Itapua for the purpose of descending the Paraná homewards, I found that the steamer Primer Correntino which, when the water is high, comes up hither from Corrientes, was now prevented by the rapids above Ituzaingo from extending her course so far, and lay at the latter port ready to receive passengers for Corrientes, being posted to sail on the morrow the 6th of August. As this was the 5th, and the port of Ituzaingo is situated 22 leagues below, and moreover the diligence, in connection with the steamer, which ought to have started to-day had deferred its departure till the

morrow, I sought a water transit in preference, as a boat had lately set up in opposition to the diligence; and so at once sent for the boatman to arrange terms, who finally agreed to take myself, servant and luggage the 66 miles for £4.

The ancient mariner rapped at my door the following morning at the unearthly hour of 3 a.m. and leaving the hotel, we walked the intervening mile between it and the port; but on passing the police quarters, the vigilante (watchman) challenged us, and it was necessary to answer a running fire of interrogatories, which was repeated by the sentry at the line barracks: nevertheless we were soon on board, where as usual the start was delayed whilst the man lit a fire and imbibed the inevitable maté, a practice so tiresome to those that do not indulge in it. About half-past four, on a beautiful starlight but cold morning, as the early mist was rising from the bosom of the river, we pushed off into mid stream, apprehensive lest a thick fog should settle thereon and detain us. The water was as smooth as glass, but a favourable breeze caught our sail and vied with the current in propelling us forward; and as the day began to break, and we were now about two leagues from our starting place, sounds, borne on the propitious airs, smote our ears; from the Paraguayan shore, cries of distress from animals being slaughtered for the market; from Itapua, the stirring notes of the reveille as the drummers beat the Diana.

As the mist began to clear off under the influence of the freshening breeze, the water became

rough, too rough for me, the cold increased so as to demand extra wrapping, the boat heeled over, and we scudded along past banks which are here much lower, bare, and only wooded in places, with open undulating camp shelving right down into the water: numerous islands too lay dotted in the river bed, which now commence and extend down to Ituzaingo, two of which, the Jacireta and Apipe, remarkable for size and almost contiguous, and inhabited, as indeed they are all, by crowds of jaguars, split the main stream into two equal channels.

Nine leagues below Itapua, we passed a bold headland called Emboncito, and round which the river wound with a heavy chopping surf, very much resembling the seas met with between Dover and Calais, and through which the boat laboured; and about midday, as the wind ceased and our progress was slow, we first heard and then saw a herd of seals on their upward struggle against the current. Bird life too, in this neighbourhood, is much more pronounced than at Itapua; gulls, kingfishers, swallows, waders, wild duck, geese, swans and various other water birds abound.

Late in the afternoon we passed the Salto or falls which, at present, when the water is low, form a bar to steamer traffic; but as these are the only ones of any importance on the Paraná, it seems to me culpable not to endeavour to remove them. As in the Uruguay, so here, I remarked that they consisted of a double reef; the first extending about 600 or 700 yards across the river which is here six

or seven miles broad; the second, more dangerous but no so broad; with a space of about 150 yards between them, in which wanted boisterously very rough broken water with a heavy ocean-like swell, that tested the capacity both of the boat and of my stomach, and through which the boatman declared his craft could not live.

Not far from here, about Caraguatay, are two large and deep trenches, falling into the Paraná from the immense and still unexplored laguna Iberá, mentioned in the first volume, the extreme northern point of which approaches close to the river; these trenches were undertaken by the Jesuits for the purpose of draining the 6000 square miles which it covers, but they did not succeed, and it remains for some future engineer to exhaust this Haarlem, as well as blow up the reefs; although, in my opinion, as the waters of the lake rise and fall with those of the Paraná, some subterranean communication between the two must exist, and therefore any such enterprise as that just referred to, must necessarily result in failure. Many are the tales current about the Iberá, its weird contents, its numerous floating islands and savage inhabitants both human and bestial; but a great part of it consists of nothing but estero (swamp), although in one place where the water is deep, clear and but a league broad, a *chata* (barge) plies to transport cattle and produce from one bank to the other.

After having been fourteen hours in the boat, we at last arrived at Ituzaingo, whose moderately high but completely sandy shore, so different from

the red clay of the Uruguay, glistened in the moonlight; and fortunately encountering the little steamer "Primer Correntino" in the port, I at once boarded her. The comisario however would not permit the luggage to be transhipped without previous inspection by the customs' authorities, and so, at this late hour, I had to go on shore and seek the port captain. His office was found shut of course, at his private house he was not, nor at the hotel, thus was I kept running about for a full hour in pursuit, until at last the boatman recognizing his voice in the street, all was soon made right, and I again embarked, had a little supper and went to bed.

The tiny steamer Primer Correntino is neither so large nor so well built as the Carimá, as she has a burden of less than twenty tons, engines of fourteen horse power, and draws but three feet of water. Her deck is covered, but there is little accommodation, within or without, for its complement of a dozen passengers. A small cabin aft, with a narrow table running down the centre, a row of lockers lining each side, to serve as seats at meals and berths at night, aided by a supplementary series of sleeping rests formed by turning up the back cushions, completed the internal arrangements, so that twelve guests might, at a pinch, find sleeping room, or thirteen, if the last comer should occupy the table: but on deck, space was even still more economized, and it would be a difficult matter for five persons to stand there, much less to turn, on account of the funnel, engine-room entrance, hatchway, steering

apparatus, cooking stove and the movements of the dozen men which formed the crew; how much less than twelve, who would be packed like sardines, unless they took it in turns to air themselves. The authorities on board however appeared to think the steamer spacious enough, and in reply to some playful twitting on my part, assured me that lately they took down thirty passengers at the same time; if so, they must have assumed a columnar position, standing one on the other, as space upwards is not so limited as laterally. Everybody on board, save the engineer, was either a Correntino or a Paraguayan, so that the loud Guaraní chatter became almost unbearable; the Correntinos are without doubt the noisiest speakers in the republic, and as they never ceased bawling, laughing and gesticulating simultaneously, even the whole time they were at work, the bliteration, from which there was no escape, was simply deafening.

Ituzaingo boasts indeed of more ancient birth than Itapua, and yet has not half its importance; here the port is very inferior and possesses only a few old canoes, whilst on Itapua waters may be seen five steamers at a time, eleven boats constantly plying backwards and forwards across the river, besides chatas for the conveyance of cattle and heavy goods, and a multitude of canoes. The town of Ituzaingo rivals its port in insignificance; sandy unpaved streets with a rancho stuck here and there, and a few enclosures rail-fenced with Tacuara, two or three tolerable stores, and only one or two buildings fit to be called houses, gave me no very exalted opinion of the place.

The tardy diligence at last turned up and unfortunately brought us a more than sufficient accession both of travellers and luggage; so that as we now numbered eleven saloon and six forward passengers, a squeeze was imminent. At 2.25 p.m. we started at full speed down the river, as the mails were much behindhand. The passage-money from Ituzaingo to Corrientes, a distance of fully sixty leagues was, first-class £1 13s., second £1 5s.; but on the return journey, which always occupies much more time, these fares are increased: the moderateness of the charge was satisfactory, especially as the food was abundant and good, and the cook and steward above reproach. During the night we stopped at three ports, which I did not rise to inspect, as Ituzaingo was sufficient in that line; but I regretted not having seen the mouth of the Paraguay, which was likewise passed as I lay coiled up wooing sleep in the cabin dungeon; so I rose early to find that we had left the republic of Paraguay behind and that the Gran Chaco now occupied its place on our right bank. Just seven leagues below the fork where the Paraguay empties its waters into the Paraná, lies the city of Corrientes on the left bank, and thirty leagues from it up the Paraguay, on the Argentine side, occurs Formosa, the capital of the Gran Chaco, containing 1500 inhabitants, and the station of a line regiment; whilst fifty leagues further up the same river stands Asuncion the capital of the republic of Paraguay, distant from Buenos Aires 346 leagues or 1038 miles. As we approached our goal within about a league, its white towers

seemed built on a promontory jutting well out into the river, and stood boldly forth bathed in the rising sun's rose colour, but the whole soon toned down, as the enchantment which distance lends gradually vanished, and at 7 a.m. we found ourselves at anchor in the port of Corrientes, having accomplished the 180 or more miles in 16½ hours, at an average speed of eleven miles an hour, going with the current.

Corrientes possesses the elements of a very fine port, as there is deep water close to its banks which are besides not so elevated as those at Rosario. The town stretches completely down to the water's edge and here and there sea-walls have been erected, but on no organised plan. On the arrival of steamers, an occurrence that frequently happens, from the traffic with Asuncion as well as the local, the port is all commotion, but otherwise semi-stagnation reigns, which is moreover reflected from the very large saloon steamer the *Galileo*, which has been lying idle therein a long time, the victim of one of those interminable lawsuits for which Argentine soil and water too are remarkable.

I put up at the best hotel, the *Hispano-Americano*, a tolerably fine building, advantageously situated about fifty yards from the landing stairs, where the service is faulty, although the charge of 8s. a day is heavy for this country. This hospitium however possesses several advantages which go far to atone for other deficiencies; rooms looking out upon the river, provided with an outlet upon a covered terrace overhanging it, from which there is a magnificent fluvial view, and whence stairs lead

at once to the water, where a boat belonging to the hotel is at the service of visitors, without extra charge, for bathing, fishing or rowing, besides offering ready conveniencies for embarkation direct from the establishment on board any of the fine steamers bound for the littoral or the interior. Indeed in these water facilities, the hotel reminded me somewhat of similar institutions at home; so that altogether I found the Hispano-Americano a pleasant temporary residence under the direction of owners who seem quite alive to improvements in order to attract customers.

The city of Corrientes, does not call for much remark: the public buildings are of the ordinary heavy, solid-masonry style, without a particle of architectural design or beauty; spread over a large area, it contains about 15000 inhabitants, but the streets are narrow and unpaved, sand reigns everywhere, and although footpaths exist they are very unevenly laid. The old fashioned houses, with corridor to the street, negative anything like uniformity, as unlike the water in their vicinity they do not seek the same level, nor are their footpaths flush with the rest, but these are being gradually replaced by a better class of buildings; in fact the town boasts even now of some really splendid modern residences, but as usual they make but little impression, as they are dotted about anywhere, a hen-roost and a mansion, a mud-rancho and a palace cheek-by-jowl. A few good shops occur, but what excited my surprise most was a truly magnificent market covering about two acres, erected for the

purpose and containing much that Covent Garden would envy. The town boasts of a neat little theatre and public library, and a National college with 300 students, under the direction of an English gentleman named Fitzsimons, his brother being the Vice-rector; and the English, although not exceeding six in number, are very much respected in Corrientes. I visited the Governor, a very affable man but lately appointed, and found him located in a Government House, not a worthy abode for so great a functionary; one of those horrible, old, tumble-down buildings, with inside patio, whose moss-laden walls were surrounded by a corridor covered with Cape jasmine and roses, and whose area, overgrown with rank grass, afforded active employment to two live mowing machines which, to my mind, were ornaments vastly more symbolic than the frowsy plaster obelisk that adorned its centre.

The Correntinos partake somewhat of the nature of dormice, as they are only to be seen in early morning or after sunset; during the day, scarce a soul is visible on account of the great heat, which rises to intensity in summer.

Every evening by moonlight I amused myself by fishing in the noble Paraná, and always had good sport, but caught chiefly only such fish as are common in Buenos Aires—the bagre, boga, dorado, &c.; and during the day, from the commanding hotel position, could watch all the operations in the port whilst comfortably seated beneath a roof without walls, where a refreshing river breeze was always circulating without interruption; a spot which must

be a perfect paradise in the hot season. I was much amused to watch Indians as they came over in canoes from the Gran Chaco in front with loads of wood for sale, but which in reality consisted of nothing but twigs broken off by hand. One man, and usually two women with long, loose, jet-black hair streaming down their backs, were seated in each canoe. The women always row, whilst the men sit lazily steering, and the precision and power with which the former handled the oars were remarkable, much better indeed than the trained sailors in the port-captain's boat. The women in fact do all the hard work and, as before remarked, possess strong muscular forms with finely developed busts, carrying all burdens on their heads. Whilst the women unload the boat, tie up the faggots and bear them off to seek a market, the man sits complacently smoking and fishing and after a while saunters along the shore picking up any odd bits of old iron or other valuables, which he carefully stows away in the canoe for the return journey.

Some little distance down on the opposite or Chaco side of the river, a solitary Englishman has planted himself, and supplies the city of Corrientes with dairy produce, especially butter, and cheese closely resembling Chester and of which I took down a sample to Buenos Aires.

I was kept waiting longer than anticipated for the steamer *en route* from Asuncion to Buenos Aires, and in the meanwhile, two fine ones had had passed up. On the return journey no absolute time for arrival at any port is fixed, so that it was a

matter of no surprise when the Taraguy, the one I was expecting, did not put in an appearance till the 11th of August, the day after she was due; and as soon as she anchored I at once embarked.

The Taraguy is a fine steamer of 300 tons, 170 feet long and 24 broad, with engines of 80 horse power, and draws $8\frac{1}{2}$ feet when loaded. Her comfortable cabins are on deck and above them is the hurricane deck, which I found loaded with 45 tons of oranges for Buenos Aires, besides sugar cane and some thousands of Diamela plants. The saloon below, is a gem of an apartment, well-lighted by numerous portholes, adorned with panel-paintings, rich mouldings and mirrors, and much brass work including a row of pillars down the centre, the whole of which is kept scrupulously burnished. Two long tables provided with luxurious benches with movable backs, stretch the length of the saloon, and all round its sides is fixed a broad softly-cushioned lounge, the floor is covered with oil cloth and strips of carpet, the tables decorated with vases of fresh flowers, a buffet for the thirsty, a writing table for the studious, whilst the musical or those desirous of innocent diversion can gratify their tastes on the piano, violin and other instruments, or with the apparatus for numerous games, here supplied.

The attendance was perfect; several waiters were always at hand to furnish refreshments at any hour; so that coffee, tea, wines and spirits were at command whenever required. In the early morning, coffee, tea, brandy and biscuits were laid out for those who chose to partake of them; the break-

fast bell rang at 10.30 a.m. and the dinner at 5.30 p.m., and the latter meal consisted of six or seven courses with white and red wines, a glass of champagne, tea, coffee and brandy, without extra charge.

In fact, the whole of the arrangements of the ship seemed destined to secure the greatest possible accommodation and comfort for the passengers, of whom there were thirty-five in the saloon, and about forty in the steerage.

The deck of the Taraguy presented the appearance of a menagerie, with its twenty parrots, a small alligator, a young seal-cub, twenty-five monkeys, a *cóati*, a tiger-cat, and about fifty small birds of different species: but what caused general mirth on board was an accomplished sheep, which had made many voyages to and fro, and equally relished shavings, sardines, hot soup, or bread, but seemed to prefer the first, as with sheepish eyes he enticed the carpenter to the bench to plane the delicious morsels for him; of grog too he was inordinately fond and possessed a head like a Scotchman for taw-dy.

The ship was well loaded besides with yerba and other produce from the up-country, but I was surprised to see the yerba from Paraguay packed in sacks, instead of tercios (hide bags) as formerly; it apparently pays better to ship the hides as such, but the yerba must suffer from the change, as it is more exposed to the action of the air, and being in the form of fine powder, to considerable loss from leakage.

The head engineer of the Taraguy was a German, but the second a Glasgownan; in fact, the river steam service in this country contains a large number of Scotchmen.

At 5 p.m. of the day of my embarkation, the Taraguy left Corrientes, and soon entered upon the part where seven channels, or as they are called currents, meet, and which give the name of "Los siete Corrientes" or in an abbreviated form Corrientes (currents) to the city. A little after midnight we arrived and stopped at the first port of Bella Vista, on the Correntino shore, 35 leagues from our starting point, where several passengers disembarked in boats and others came on board. Again, early the next morning, appearing off the mouth of the stream that leads to the important and thriving town of Goya, 22 leagues further down, on the left bank of the Paraná, but distant from it a league, we were met by a considerable number of boats, and another interchange of passengers took place. Goya is noted for its dairy produce and the cheese made there rivals the Gruyère in my estimation. On the Gran Chaco or Santa Fé coast opposite Goya, lies the colony of San Gerónimo the most northerly of the system of thirty-two agricultural settlements established in that province. The adjustment of matters at Goya occupied an hour, after which hurrying on our course downwards, we encountered in the afternoon the National steamer "Vigilante" having in tow a coal vessel, and bound for the Vermejo with the object of searching, under Dr.

Fontana's* direction, for the missing and shipwrecked crew of the very steamer in which I was to have returned from Oran: but stopped not until half past four, when we reached the embouchure of a very deep but not broad stream leading to Esquina, 30 leagues from Goya, a town lying prominently on a hill, but removed from the banks of the Paraná, where our Triton was again besieged by a shoal of minnows. Hereabouts the coasts on both sides are almost level with the water, so that when the river is flooded, they are covered, a misfortune that accounts for the more or less inland situation of the towns, as well as the cypress-like position of the coast-guard station here, which is elevated upon masonry arches; yet in spite of this, an English colony, the "Alexandra" has been posted in the Chaco, about a league above and in front of Esquina. This "colonia inglesa," surnamed the "Alexandra" in honor of H. R. H. the princess of Wales, comprises twenty-two square leagues of land, in the Santa Fé portion of the Gran Chaco, watered by the San Xavier, an insignificant tributary of the Paraná, but lies nearly three leagues inland, the intervening space between it and the last mentioned river being nothing but swamp which, in times of flood, is covered with the river overflow. Messrs. Thomson, Bonar & Co. of London, the founders in 1870, have expended immense sums of money to secure its success, but hitherto without result, as the original

* This Dr. Fontana is the same mentioned before as having attempted to cross the Gran Chaco; as secretary to the Governor, he resides at Formosa, the capital of that territory.

English holders have dwindled to a mere fraction, and about a hundred industrious Italian Waldenses are pretty well all that now represent the colonial body. To Indian invasions, locusts, drought, absence of convenient outlets for produce, unfitness, the English method of colonization which is unsuitable for South America, and above all the want of capital, must be debited this failure, as the climate and soil are eminently adapted for any agricultural produce, save perhaps the cereals; and cattle breeding, which is now almost entirely pursued, remunerative. A Church, school-house, and library have been established, and an English chaplain is still resident at the "Alexandra"; but unfortunately, notwithstanding these and other advantages, the star of this royal nursling is not at present in the ascendant.

The navigation of the Paraná is by no means an easy task; the pilots, who steer simply by their knowledge of the channels, have to be continually on the alert, sounding whenever they are in doubt, as the beds are continually shifting, and islands appear and disappear with rapidity: a little below Esquina, some few years ago, there was a large and moderately elevated island, clothed with a thick growth of heavy timber, to-day not a vestige is left; above Goya, there existed, but a short since, a saladero erected 300 yards from the shore, now the river passes over its site.

At 9 p.m. we arrived at La Paz in the province of Entre Rios, 22 leagues below Esquina, a very enterprising little town, situated on a hill, directly

on the banks of the Paraná, whose deep waters lave its very base, contrasting in this respect with the sites of Goya and Esquina; but it was not always so, its present proximity is only due to a complete change of course which the inconstant channel has furrowed out for itself, during the last ten or twelve years. We have to moor alongside a pontoon in order to take in coal, and boats immediately flock on the opposite quarter, where they are in danger of being smashed against the vessel's sides, so strong is the current.

Opposite La Paz, on the Gran Chaco side, lie grouped a cluster of colonies, which now continue all the way down to the city of Santa Fé, on whose outskirts they culminate in the two oldest of the series, Esperanza and San Carlos.

At 5 a.m. on the following morning we were abreast of the port of Paraná in Entre Rios, 40 leagues south of La Paz, which is certainly one of the prettiest, if not best, on the lower Paraná, having passed, a few leagues above, the colony of Villa Urquiza, named after the late dictator of Entre Rios mentioned in the first volume. This colony and its brother San José on the Uruguay, were both established about the same time as those in Santa Fé, and are flourishing, but do not entice fresh settlers. A noble and extensive sea-wall, constructed entirely of stone, and furnished with a mole alongside which large vessels can moor at all states of the tide, prevents the encroachments of the river upon, and adds to the beauty of, the port of Paraná. On the top of the sea wall runs a fine, broad, artificially

made road, up which a tramway courses to the town which lies about a league off. Behind this road rises a row of houses backed up by a cliff-like barranca towering fifty feet above them. Further down southwards from the port, the cliff is quarried for lime that exists here in great abundance; and lime kilns in operation, with piles of the material ready for shipment, and numerous vessels loading it, serve to render the scene lively. Here too at a distance of 300 miles from the sea, marine fossils abound, but have to be sought deep; sharks' teeth occur in any quantity, and the skeleton of a whale was lately unearthed. As the Taraguay began discharging a considerable quantity of cargo, I thought I should have sufficient time for a run up to the town and back by tramway, but the matter was doubtful as the first car only started at 6.30 a.m.: it so happened however that just as it was off, a fresh cargo of hides, &c., came down for shipment to the littoral, so I at once landed and took my seat. Up we went along the magnificent sea-wall for a mile or so, and then through a ravine, winding about in a serpentine manner on an artificial embankment, crossing bridges, and piercing cuttings, of magnitude equal to railway works: the line was paved throughout and enclosed for the use of the tramway alone, whilst a splendid, ample, and even macadamised highway, not far off, led in the same direction. Up this steep incline then dashed the tramway as fast as the three horses could gallop, and turning round curves near the top of the hill, we obtained exquisite views of the river and port.

Emerging once more on to the main road which, straight as an arrow for at least a mile, and lined with trees, will form, in time, as fine a boulevard as can be seen, with broad footpaths and lampson each side, seats here and there, and pretty villas covered with creeping plants, peeping forth from the midst of their cultivated enclosures, we traversed its whole length to enter one of the plazas, where is a fine church not quite finished, and turning round to the right entered the streets of the city, getting a glimpse, over the plaza precincts, of the beautiful undulating lands of Entre Rios.

The town of Paraná, which in 1853 was the capital of the republic, to which circumstance it owes many of its advantages such as educational fame, is very clean, neat and compact, with well paved and lighted streets, and in all respects appears to be a desirable locality wherein to pitch one's tent; but I noticed a vast improvement since my first visit three or four years ago, and above all, the Port works, tramway and road, amazed me by the solidity and perfection of their construction.

From the city of Paraná to that of Santa Fé on the opposite shore and the capital of the province, is a distance of seven leagues, and both places are well supplied with steam traffic, as three small local steamers ply continually between them, besides the large ones from Buenos Aires, which visit each several times a week. Santa Fé is approached by a long Riacho (small river), which has an exceedingly tortuous course, and some tolerable port works have been constructed there too, but the town bears an

ancient and sleepy air and is not worthy of much notice in other respects save its monasteries and churches, which are all of the old dull style of massive brickwork.

We left Paraná about 9 a.m., immediately after the departure of the fine new steamer *Diana*, that runs on this route to and from Buenos Aires, proceeding fast down the river, and soon passing Diamante, a port on the Entre Riano shore, opposite which on the other coast lies the colony of Corondá. Late in the afternoon we breasted San Lorenzo in Santa Fé, amid very rough water, as a stiff pampero was blowing up against the current; and in this neighbourhood, on the Santa Fé shore, where the water is very deep close up to it, the barranca is of such soft and tenacious clay, that it bears the appearance of having been cut with a knife, so sharply perpendicular is its face. Rosario, which lies forty leagues below Paraná, was reached at dark, and after three hours' detention, we proceeded on our way down to Buenos Aires, 70 leagues from Rosario or 259 from Corrientes, where we arrived late on a Sunday afternoon, passing through the newly dredged channel into the Boca, on whose banks stood numbers of market men with carts and baskets ready to despoil our fair ship of her golden argosy.

ERRATA et CORRIGENDA

PAGE	LINE	ERROR	CORRECTION
15	12	the	the
18	30	same	some
26	22	Caiar	Chabar
36	31	Toricellian	Torricellian
41	14	Squire	Squire
44	11	some	some
45	last	constant	constant
53	11	out	out of
55	30	out	out
68	11	cestroides	cestroides
69	22	Cucurbita	Cucurbita
91	7	conspicuous	conspicuous
103	10	and and	<i>dele one</i> and
103	18	European	European
113	5	its	it
121	last but one	is	are
155	last but one	changing	changed
159	18	injunctions	injunctiōns
166	26	be	be
171	5	and	and
179	8	Quinchua	Quichua
184	8	which	with
198	8	hours's	hours'
209	25	atriventis	atrivētris
228	24	the mines	then
241	16	are	are
243	6	Mendoza	Mendoza
247	9	forwith	forthwith
262	14	but a distance	but at a distance
274	28	would be enumerate	would be to enumerate
300	10	young	young
307	27	buy	but
352	14	branched	branched
395	25	vehicle	vehicle
429	5	their	thar
448	13	twelver	twelve
449	29	It	In
459	23	down	down
457	2	he	it
472	11	of Italian	of a Italian
482	29	for	far
483	6	its	it
503	25	thirty-two	forty-one



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